

DEVELOPMENT PROGRAM

11



DEVELOPMENT PROGRAM

11.1 Introduction

As one of the largest private commercial land holders within the Adelaide metropolitan area, AAL needs to identify and take advantage of the opportunity to add value to the traditional business activity by maximising the property development opportunities of airport land that is not required for aeronautical purposes in the short-to-medium term.

Such development will complement and enhance future airport operations, support the delivery of the wide range of services and facilities demanded by airport users, improve accessibility to the airport, create employment opportunities, and contribute to the Gross State Product (GSP).

This section is consistent with sub-sections 71 (2) (gb) and 71 (2) (gc) of the *Airports Act 1996* outlining the proposed airport developments within the first 5 years of the Master Plan, including detail on the scale, the effect on employment levels at the airport, the impact on the local and regional economy, and possible community impacts. Commentary is not limited to non-aviation developments, but is also given for those with aviation connotations, given the possible interrelationship of these with one another in several precincts at the airport and particularly toward supporting interrelated activities such as emergency services.

For the purpose of this document, 'aviation use' is defined as those aviation-related support industries that cater for airport and airline services such as facilities for crew, ground staff, catering, administration offices, freight and engineering services and hangars with a direct connectivity to aprons and taxiways. Car parking and vehicle storage is also included (see Glossary for further detail).

In addition, this section identifies the environmental aspects of the possible developments consistent with the Adelaide Airport Principles of Development Control (included in Chapter 7) and the Environment Strategy (Chapter 10), as specified at sub-section 71(2) (f) and (g) of the *Airports Act 1996*. Further, while traffic management issues are also mentioned, more specific detail is included in the Ground Transport Plan (Chapter 9) consistent with Section 71 (ga) of the Act.

In keeping with the 20-year planning horizon of the Master Plan, an indication is given of possible development projections after the fifth-year, which allows for progressive updating in each succeeding 5-yearly Master Plan period.

It is emphasised that development prospects over a 5-year horizon, or the extended period of 20 years, do not constitute any firm commitment toward development on airport land. Economic fluctuations and uncertainties in the aviation and property market prevent a regimented approach to airport development on a set schedule. However, when the Structure Plans and the inherent development themes in Chapter 7 – Land Use Planning for each precinct are considered, a planning direction is evident for community and stakeholder clarity.

11.2 Potential Future Key Developments – Planning Horizon

Within the planning horizon of 5 years (to 2019), the total direct and indirect increases to GSP associated with future airport developments have been forecast to be in the region of \$775 million, or a 40% increase over 2014. Over 20 years, the total direct and indirect increases to GSP associated with future airport developments are likely to increase by \$2.12 billion over that expected by 2014 of \$1.94 billion. Given the projected range of possible developments, the direct employment increases have been estimated to be 3,480 persons in 5 years and 9,512 persons by 2034 over the current level in 2014 of 8,726. For comparison purposes, Tables 11.1 and 11.2 provide a base case breakdown of these figures by 2014 to 2019 and 2034 for each of the Adelaide Airport precincts.

Table 11.1 Future Key Developments and Forecast Employment

EMPLOYMENT (JOBS)		By 2014	By 2019	Increase over 2014	By 2034	Increase over 2014
Direct on Precinct						
Runways	(A)	184	209	25	310	126
	(NA)	-	-	-	-	-
Terminals & Business	(A)	4,744	5,431	687	8,186	3,442
	(NA)	2,601	4,165	1,564	6,393	3,792
Torrens / West Beach	(A)	-	-	-	-	-
	(NA)	17	22	5	31	14
Tapleys	(A)	208	267	59	381	173
	(NA)	208	244	36	359	151
Morphett	(A)	-	10	10	160	160
	(NA)	122	479	357	596	474
Airport East	(A)	-	260	260	260	260
	(NA)	642	1,120	478	1,562	920
PRECINCT TOTALS	(A)	5,136	6,177	1,041	9,297	4,161
	(NA)	3,590	6,030	2,440	8,941	5,351
Sub-Total:		8,726	12,207	3,481	18,238	9,512
Induced (Off Precinct)		9,033	12,636	3,603	18,880	9,847
TOTAL		17,759	24,843	7,084	37,118	19,359

Key: A – Aviation NA – Non Aviation

Table 11.2 Potential Future Key Development and Forecast Impact on Gross State Product

	GROSS STATE PRODUCT (\$ MILLION)				
	By 2014	By 2019	Increase over 2014	By 2034	Increase over 2014
Runways Precinct	\$41	\$47	\$6	\$69	\$28
Terminals & Business Precinct	\$1,636	\$2,137	\$501	\$3,248	\$1,612
Torrens/West Beach Precincts	\$4	\$5	\$1	\$7	\$3
Tapleys Precinct	\$93	\$114	\$21	\$165	\$72
Morphett Precinct	\$27	\$109	\$82	\$168	\$141
Airport East Precinct	\$143	\$307	\$164	\$406	\$263
PRECINCT TOTALS	\$1,944	\$2,719	\$775	\$4,063	\$2,119
Proportion of GSP % (excluding Public)	2.75%				
Proportion of GSP % (including Public)	2.1%				

11.3 Potential Future Key Developments – Planning Horizon – 0 to 5 Years

The various foreseen future developments in the next five years are outlined in Table 11.3, in addition to the possible scale of development, possible range of increased employment levels, and where relevant, potential customer

extent for this period. The likely trigger for development is also included in recognition of the need for any development to be based upon both airport requirements, business viability and economic constraints. New development in each precinct will also need to be consistent with the Structure Plans and Envisaged Uses prescribed in Chapter 7 – Land Use Planning.

Table 11.3 Potential Future Key Developments at Adelaide Airport (0-5 years)

Services	Type of Development	Scale	Additional Employees/	By 2019
RUNWAYS PRECINCT				
Airport Services:	Aviation Rescue and Fire-Fighting		31	Aviation needs to accommodate A380 Aircraft
	Demolition of former AsA Control Tower	N/A	N/A	Obsolescence
Non-Airport Services:	None expected	–	–	–
TERMINALS & BUSINESS PRECINCT				
Airport Services:	Terminal 1 Expansion	5000m ²	} 500	Aviation growth
	Apron Expansion	3 Aircraft		Aviation growth
	General Aviation Terminal	1,000m ²		Replacement facility
	Offices to supplement Terminal Activity	5,000m ²	240	Terminal expansion need
	Relocation of Hangar and Freight Facilities to Airport East	(15,000m ²)	Included at Airport East Precinct	Aviation need and terminal expansion
	Joint Oil Storage Facility (JOSF)	Additional 3 megalitres of Fuel Storage Additional 3 kilometres of Tank/Fuel Pipeline	20	Aviation demand
	In-Flight Catering Facility	2,400m ²	40	Aviation need
	Long-Stay Car Parking	500 spaces	20	Aviation need
Non-Airport Services:	Office Park	25,000m ²	860	Commercial demand including Ancillary to Aviation Services
	Hotel	260 rooms	200	Demand from Aviation Expansion
	Bulky Goods Store	13,000m ²	180	Ancillary to IKEA activity
	Office & Technology Facility, Burbridge Policy Area	2500m ²	40	Central Adelaide Location with International linkage
	Office/Warehouse Burbridge Policy Areas	20,000m ²	400	Commercial demand related to central location

Services	Type of Development	Scale	Additional Employees/	By 2019
TORRENS PRECINCT				
Airport Services:	NIL			
Non-Airport Services:	Recreation Sports Field Improvements/ Dog Park	10ha	N/A	Community need
WEST BEACH PRECINCT				
Airport Services:	NIL			
Non-Airport Services:	Sports Fields associated with Adelaide Shores (Softball)	3ha	N/A	Community need
	Events	3ha	100 short-term employees	Community events in a central location
	Service Trade Activity/ Upgraded Petrol Station	500m ² / 3ha	5	Central location
	Aviation Fuel Pipeline	2km	N/A	Aviation infrastructure
TAPLEYS PRECINCT				
Airport Services:	Joint Emergency Services, Offices, Hangar and Apron/ Helicopters	4,500m ²	66	Centralisation of emergency services to the Tapleys Precinct
	Animal Hotel	1500m ²	14	Aviation relativity for travel
Non-Airport Services:	Retail Expansion/Service Trade/Car Parking	6ha	30	Subject to demand
MORPHETT PRECINCT				
Airport Services:	NIL			
Non-Airport Services:	Office/Warehousing	5,000m ²	10	Demand from aviation and commercial developers
	Office/Warehouse & Parcel Delivery	20,000m ²	360	Aviation Association
AIRPORT EAST PRECINCT				
Airport Services:	Freight Cargo	10,000m ²	100	Aviation need (relocate from Terminals Precinct)
	Hangar Development	6,000m ²	160	Aviation need (relocate from Terminals Precinct)
Non-Airport Services:	Office/Warehousing/ Logistics	28,000m ²	500	Commercial demand
	Car Parking/Storage	4ha	N/A	Link to Terminal needs

11.4 Possible Future Airport Development – Planning Horizon – Up to 2034

Table 11.4 is a schedule of potential Adelaide Airport developments that could occur within the period of up to 20 years. It is noted that some of these could be

advanced to occur within 5 years or extended out beyond this planning horizon, taking into account demand and economic circumstances.

Table 11.4 Potential Future Key Developments at Adelaide Airport (6-20 years)

Services	Development	Trigger/Comment
RUNWAYS PRECINCT		
Airport Services:	Ongoing Development of Aprons/Hard Stands and Aircraft Parking activity associated with Terminal Expansion and Freight Services at Airport East	Aviation need
Non-Airport Services:	None Expected	
TERMINALS & BUSINESS PRECINCT		
Airport Services:	Terminal Expansion	Aviation need
	Office Park Development	Increase demand for aviation services and central location
	Car Parking Short Stay (3,000 spaces) Expansion	Expansion of multi-level car parking
	Car Parking Long Stay (2,200 spaces) Expansion	Aviation Services expansion
	Flight Catering/Ground Services Equipment (GSE)	Based upon Aviation Services need
	Car Storage 2,000 spaces	Expansion need for Car Rental/Valet
	JOSF Fuel Storage Tank (3 megalitres)	Based upon Aviation Demand
Non-Airport Services:	Office/Warehousing Burbridge Policy Area 10,000m ²	Based upon Expansion and Logistics and Industrial Demand
TORRENS PRECINCT		
Airport Services:	NIL	
Non-Airport Services:	Recreational Sports Improvements	Community need
	Aged Care Expansion (Sensitive Development)	Community need
WEST BEACH PRECINCT		
Airport Services:	NIL	
Non-Airport Services:	Sporting & Recreation Improvements	Community need
	Service Trade Premises	Commercial opportunity
	Community Garden	Community need
	Events/Car Parking/Storage	Commercial facility
TAPLEYS PRECINCT		
Airport Services:	Expanded Emergency Services Activity	Aviation growth/community service
Non-Airport Services:	Retail Shopping Centre Expansion/Retrofit	Commercial activity

Services	Development	Trigger/Comment
MORPHETT PRECINCT		
Airport Services:	Office/Warehousing/Freight Facilities (25,000m ²)	Aviation/Freight/Industrial need
	Aviation Hangarage	Dependent upon Aviation expansion
Non-Airport Services:	NIL	
AIRPORT EAST PRECINCT		
Airport Services:	Office/Warehousing/Freight	Aviation/Industrial need
	Hangarage	Aviation need
Non-Airport Services:	NIL	

11.5 Scope of the Development Assessment

As noted previously, Chapter 7 outlines the parameters of the envisaged development for each of the Adelaide Airport Precincts, encompassing the overall Objectives, Desired Character and Principles of Development Control for the Airport Zone, and also individually for each precinct consistent with the respective Structure Plans. In brief, new development proposed on airport land should be consistent with the Envisaged Uses for the relevant precinct, and will be assessed by AAL against the Objectives and Principles of Development Control for both the Adelaide Airport Zone and the relevant precinct policies.

In addition, all applicable security measures will be considered for every development based on Adelaide Airport's local security risk assessment and analysis.

As previously discussed, the proposed or possible developments within the next 5-year and 20-year periods are outlined in Tables 11.3 and 11.4. The following sections describe the extent of existing developments within each precinct of Adelaide Airport and the surrounding development. Environmental considerations specific to the relevant precinct are also discussed covering noise, land and heritage management, soil and groundwater contamination, stormwater quality, and local air quality. A detailed description of the environment objectives and management actions applicable for new development within the airport site is included in the Environment Strategy (Chapter 10).

Where relevant, some reference is included on traffic accessibility, with further detail contained within the Ground Transport Plan (Chapter 9).

11.6 Runways Precinct

Information on the airfield infrastructure that occurs predominately in the Runways Precinct is detailed in Chapter 6 – Aviation Infrastructure, including both existing and future development.

11.7 Terminals & Business Precinct

11.7.1 Existing & Future Development

Within the Terminals & Business Precinct there are five Policy Areas covering Terminals & Aviation, Office Park, Export Park, Retail and Burbridge Business Park.

The existing and future development for the Terminals and Aviation Policy Area is covered more fully at Chapter 6 – Aviation Infrastructure.

The anticipated development at Export Park is primarily completed, with the prospect of the development of a further office complex of around 4,500m² to 6,000m² at the entrance to the airport site, fronting Sir Richard Williams Avenue and Sir Donald Bradman Drive.

Similarly, IKEA retail development fronting and accessed primarily from Sir Donald Bradman Drive is in place, with a Masters store to be completed in 2014.

Development of the Office Park Policy Area is to occur progressively over the life of the Master Plan, and beyond, commencing from the most easterly area facing Sir Richard Williams Avenue and projected to account for around 50,000m² of office space over time. Within the first 5 years of the Master Plan, a new office block of around 4,500m² in size is anticipated, and will focus upon ancillary activities associated with T1. Further development of new office complexes are forecast to extend to past 15,000m² within the next 5 years up until 2019.

Adjoining the Office Park Policy Area, an Airport Hotel of some 260 suites, function rooms and restaurants is anticipated to be developed, broadly consistent with a prior Major Development Plan approval, which allows for such a hotel to be substantially underway in October 2015.

Within the Terminals & Aviation Policy Area, it is considered that the historic Vickers Vimy aircraft may be relocated to the vicinity of the plaza area and future Airport Hotel. Existing hangars and freight facilities are also to be progressively replaced by terminal expansion and relocated to the Airport East Precinct. The development of a further in-flight catering complex of 2,400m² is also anticipated within this policy area, along with expansion of long-stay car parking – dependent upon demand. Also bordering the Burbridge Business Park Policy Area, an expansion of the capacity of the existing JOSF is expected, with one new tank to occur within 5 years. An associated fuel pipeline connecting the JOSF to an existing multi-user fuel line in Military Road, West Beach may also occur within this locality.

Within the Burbridge Policy Area, around 2,500m² of further development is expected within the next 5 years, including an office/technology facility and office/warehousing, with around 20,000m² estimated in total. The provision of long-stay or staff car parking within the airport site is also likely along the northern perimeter of the policy area.

Figure 11.1 Boart Longyear building within the Burbridge Business Park Policy Area



11.7.2 Employment / Economic Aspects

Within the next five years, taking into account the scale of anticipated development within all Policy Areas, the degree of terminal expansion, the forecast increase in aviation travel, and the extent of airline bases occurring at Adelaide Airport, Hudson Howells estimates that the increased employment will be in the vicinity of 2,250 persons. This incorporates around 680 persons in the aviation industry, and 1,564 persons associated with non-aviation employment. This derives an increase in GSP of some \$501 million, and significantly, a 30% increase over the current GSP of \$1,636 million.

11.7.3 Environmental Considerations 0-5 Years – All Policy Areas within entire Terminal & Business Precinct

Allowing for the specialist nature of much of the development associated with the terminals and aviation infrastructure, the possible environment impacts of such development is being considered by airport operators and tenants, and is consistent with the provisions of the *Airports (Environment Protection) Regulations 1997*. The identified environmental impacts include the following:

Waste

With the potential of varied waste streams generated from expanded development, Waste Management Plans for operations with a risk of increasing pollution levels and attracting birds will be a prerequisite in development approvals.

Energy and Water Resources

New facilities will increase demand for energy and water. Additional energy consumption will in turn elevate greenhouse gas emissions. In order to combat this, numerous energy and water efficiency features were built into T1, including a state-of-the-art building management system to control lighting and HVAC loads, 'go slow' elevators, solar hot water, high use of natural light, automatic blinds on west-facing windows, dual reticulation systems for recycled and potable water and, later, the installation of a solar panel array. New airport and non-airport development will also need to consider these resource-saving features, and be consistent with the Principles of Development Control specified at Chapter 7 – Land Use Planning. Additionally, water conservation harvesting and reuse practices, including use of the existing recycled water or treated stormwater, will also feature (see Section 10.12 of Chapter 10).

Airside operators will also be encouraged to reduce their reliance on diesel-powered ground vehicles in favour of electric and LPG-driven plant in an effort to reduce fuel consumption.

Noise

Aircraft has the potential to generate noise through the idling of engines and auxiliary power units. Noise may also emanate from mobile diesel generators, engine ground running, plant operations, roads and car parks including truck delivery and loading operations. The use of preconditioned air, 400 Hz fixed electrical ground power to aircraft at terminal parking bays, and the introduction of quieter aircraft have assisted to reduce noise emissions.

As a result, activity at T1 has not exceeded the relevant regulatory noise criteria since the building was commissioned. Future terminal and apron expansion to the west of the airport site will have negligible impact on adjoining uses at the airport boundary. New developments are subject to noise modelling when appropriate, with attenuation controls to be implemented if required.

Similar modelling will be undertaken for the design and construction of developments associated with the general aviation terminal, and also commercial and retail developments. Due consideration of individual operational hours will be given, also noting that the airport is operational 24 hours every day of the year.

Past acoustic modelling has been undertaken for the Burbridge Business Park Policy Area, which considered its ultimate development, together with the associated transport using the several access points.

From the above, such activities are expected to readily meet the relevant environmental acoustic criteria on a 24 hour per day, 7 days per week operational basis. As new structures are developed, these activities will also be monitored to ensure operational compliance (refer to Section 10.9.1 of Chapter 10).

Soil, Groundwater and Stormwater

New development has the potential to contaminate surface waters as a result of additional aircraft and vehicle operations. For example, expansion of T1 will accommodate predicted increases in aircraft activity and the accompanying increase in ground vehicle use. This has the potential to contaminate surface waters, as vehicle parking can result in leakages of hydrocarbons, while maintenance and refuelling operations can result in accidental spillages. The storage of fuels, oils and chemicals has the potential for spills to lead to stormwater contamination if proper storage facilities and management practices are not in place.

It is expected that stormwater runoff will increase proportionately with paved surface area; but with this not likely to be significant (based on the current area developed within the precinct). Excess water not harvested from roofs will be directed into existing or new interceptor units.

The anticipated extension of the JUHI (underground refuelling pipeline), associated with terminal and apron expansion presents a risk of fuel leakage contaminating soil and groundwater. Mobile refuelling tankers will continue to be used for both ground vehicles and aircraft that are not serviced by the refuelling pipeline, and will be required to comply with airport refuelling and spill response procedures. Stormwater collected from apron areas will be directed into large underground interception units, which is a standard design feature that will be extended to newly constructed aprons.

Currently, the storage of fuels, oils and chemicals at the JOSF (fuel depot) has the potential for contamination to soil, groundwater and stormwater through spills and leakages. Potential impacts as a result of the facility's operations will continue to be controlled through regular monitoring and auditing of its environmental management plan. The management of groundwater and possible soil contamination is detailed in Section 10.9.4 (Chapter 10).

Land and Heritage Management

The relocation of the Vickers Vimy aircraft will require a suitable environmentally-controlled facility to control light, humidity and temperature, as a pre-requisite. This will be arranged according to specialist engineering advice.

It is also noted that construction sites involving earthworks in the Burbridge Business Park Policy Area could uncover the presence of archaeological artefacts and, where required, will be managed responsibly in accordance with AAL procedures, as outlined at Section 10.14.4 (Chapter 10).

Local Air Quality

Terminal expansion will be accompanied by growth in aircraft numbers, and also numbers of passengers travelling by private vehicles to and from the airport, will result in both increased ground operation of aircraft engines and induced traffic emissions respectively. Similarly, the increased use of motor vehicles around the apron areas will result in further vehicle emissions. The Environment Strategy includes the requirements for ongoing monitoring of overall airport air quality (refer to Section 10.9.2 of Chapter 10).

11.7.4 Community – Relationships to State/Local Planning

As identified in Chapter 7, Adelaide Airport is classified under the State Government's *30-Year Plan for Greater Adelaide* as a 'Specialist Activity Centre' that provides essential aviation transport to the community and in doing so is a primary employment base for the city. Vacant industrial land within the Burbridge Business Park is development-ready and is identified as Employment lands in the *Housing and Employment Land Supply Program 2010*. Given this recognition of Adelaide Airport within State Government strategic documents, the airport's ongoing importance to the surrounding community is apparent.

11.7.5 Road Transport Integration

The Ground Transport Plan (Chapter 9) provides specific focus toward the relationship of airport activity with the surrounding road network, and also identifies progressive traffic segregation in an easterly and westerly direction. The State draft Integrated Transport and Land Use Plan has also recognised the improvement of all primary intersections leading to the airport from the Adelaide Central Business District, which are part of the National Land Transport Network.

11.8 Torrens Precinct

11.8.1 Development Extent – Existing

Existing development within the Torrens Precinct consists of an aged-care facility, specialist hockey pitch with associated club rooms, and over 10 hectares of open space reserved for sporting activities and events.

11.8.2 Development Extent – Projected

Future developments within the Torrens Precinct may include expansion of the aged-care facility and associated retirement housing in line with future demand. The regeneration of the former sports fields is also likely, in addition to the development of a dog park in conjunction with the City of West Torrens on land to the south side of Ingerson Street.

11.8.3 Scale of Development 0-5 Years

It is envisaged that development within the next 5 years will be primarily directed toward the regeneration of the sports field involving cricket, soccer and football, and the establishment of a dog park.

11.8.4 Employment / Economic Aspects 0-5 Years

Consistent with the potential development within the Precinct, it is forecast that there will be an increase in non-aviation employment numbers of approximately 5 people. The increase in GSP for the Torrens Precinct is likely to be marginal at around \$1 million up to 2019.

11.8.5 Environmental Considerations 0-5 Years

There is the potential for varied waste streams that could be generated from expanded developments during this period. Any new activity with a risk of attracting birds will be required to prepare a waste management plan and establish mitigation actions consistent with the Environment Strategy (Section 10.13 of Chapter 10).

If necessary, stormwater will be directed from vehicle pavements into interceptor units before being directed into off-airport drainage systems.

To reduce reliance on potable water, AAL will promote the use of recycled water, noting that such use of non-potable water on sporting fields would deliver significant savings. The layout of the Recycled Water Supply Points within and surrounding the Airport is included in Chapter 8 (Figure 8.3) with more detail on water conservation outlined in Section 10.12 of Chapter 10.

Detailed acoustic modelling of sporting and club room activities, including associated traffic movements, has been previously undertaken, particularly for activity in Ingerson Street, West Beach. A suitable outcome was determined through the placement of higher noise emitting activity further away from residences, the use of suitable landscaped mounding, fencing or walls, and the strategic orientation of building openings away from the noise source. The selection of sporting groups or activities will take into account this previous acoustic modelling against the potential for noise emissions, and further modelling conducted as necessary to ensure ongoing compliance, and as outlined in Section 10.9.1 (Chapter 10).

11.8.6 Community – Relationships to State/Local Planning

The Torrens Precinct is suited to sports activities and parks closer to Tapleys Hill Road, given the aircraft height restrictions under a runway approach.

11.8.7 Road Transport Integration

Current access points into the precinct are suitable with no additional ones warranted. A possible exception would be to allow car parking on land to the south of Ingerson Street associated with a new dog park.

11.9 Tapleys Precinct

11.9.1 Development Extent – Existing

Existing development within the Tapleys Precinct consists of a brand outlet centre (known as Harbour Town), a supermarket, fast food outlets, aviation-related support activities and helicopter facilities.

11.9.2 Development Extent – Projected

During the period of the Master Plan, the enhancement of the Tapleys Precinct is forecast through the development of emergency services activities, helicopter services and expanded animal kennels.

11.9.3 Scale of Development 0-5 Years

The extent of built form space to be developed in this precinct over the next 5 years could be approximately 6,000m²; covering kennels, aviation hangars/offices, emergency services facilities and helicopter hangars.

11.9.4 Employment / Economic Aspects 0-5 Years

Direct employment prospects are forecast to increase by an estimated 109 FTE employees associated with the new developments, and a contribution to GSP by approximately \$24 million.

11.9.5 Environmental Considerations 0-5 Years

Waste

Varied waste streams are expected from retail and fast food developments. Waste management plans and mitigation actions are sought where there is any risks of attracting birds, with waste recycling also encouraged consistent with Section 10.13 (Chapter 10).

Water Resources

To reduce the reliance on potable water, allowance exists for the use of recycled water into the Tapleys Precinct for new developments; as identified in the reticulation layout against at Figure 8.3 (Chapter 8) and detailed in Section 10.12 (Chapter 10).

Noise

Helicopters have the potential to generate noise through the idling of engines. Noise may also emanate from engine ground running, plant operations, roads and car parks including truck delivery and loading operations. Potential ground-based noise is remote from residential areas, aided by the existing buffer zone and shielded by noise generated by passing arterial road traffic.

Activity at the helicopter facilities has not exceeded relevant regulatory noise criteria at the western airport boundary (west of Tapleys Hill Road) since the helipad was commissioned. Further expansion of these facilities is therefore likely to have negligible impact, however, close monitoring will be maintained consistent with the Environment Strategy (Section 10.9.1 of Chapter 10).

Soil, Groundwater and Stormwater

The existing storage of fuels, oils and chemicals at the helicopter facilities are monitored for spills and leakage to soil, groundwater and stormwater contamination, and this will continue to be similarly applied for new developments in accordance with the Environment Strategy (Section 10.9.4).

11.9.6 Community – Relationships to State/Local Planning

Land at the existing Harbour Town brand outlet centre is categorised as a 'Bulky Goods Centre' in the *30-Year Plan for Greater Adelaide* and its ongoing activities are intended consistent with its status as part of Adelaide's Retail Centre hierarchy. Further expansion and remodelling of the brand outlet centre is expected within the next five years, including showrooms and various other retail outlets.

11.9.7 Road Transport Integration

Currently, access into the Tapleys Precinct is via Tapleys Hill Road, and this level of service is felt to be adequate for future development over the next five years.

11.10 West Beach Precinct

11.10.1 Development Extent – Existing

Existing development in the West Beach Precinct consists of a golf course, soccer field, stormwater detention facility and a petrol filling station.

11.10.2 Development Extent – Projected

Future development prospects include service trade premises, motor vehicle or similar sales, and an enhanced petrol filling station with an associated car wash/convenience store. It is also noted that the staging of suitable events on land facing West Beach Road is practical on an as-needed basis.

11.10.3 Scale of Development 0-5 Years

The principal development activity over the next five years is expected to be sporting facilities associated with the Adelaide Shores Complex, along with several commercial improvements on land in the vicinity of Tapleys Hill Road. The staging of events similar to that of the 2013 'Cavalia' is also likely.

11.10.4 Employment / Economic Aspects 0-5 Years

In consideration of the likely scale and nature of potential developments, it is expected that only a marginal increase in the number of employees will occur by around 5 FTE employees. An increase in GSP of \$1 million is likely. The economic impact of events has not been included in recognition of the generally short-term occupancy status.

11.10.5 Environmental Considerations 0-5 Years

The West Beach Precinct is remote from sensitive receptors and proven to be suitable for the staging of public events. Acoustic modelling will be undertaken for prospective high-noise activity.

Minimal waste and litter impacts are expected from the identified future developments, however waste bins will be provided at fast food and sporting facilities to limit litter migration. Waste management plans and mitigation actions will be sought for any high risk activities.

New car parking and herbicide over-spraying associated with the identified developments have the potential to contaminate stormwater. Surface runoff from any permanent paved vehicle parking areas will be directed into interceptor units in an effort to reduce any contaminant entering the off-airport drainage system. Ongoing evaluation of all environmental considerations will be undertaken consistent with the Environment Strategy, particularly in terms of Section 10.9.3 (Stormwater) and Section 10.9.4 (Soil and Groundwater) of Chapter 10.

11.10.6 Community – Relationships to State/Local Planning

The forecast development activity for the West Beach Precinct is consistent with surrounding land uses, or commensurate with the arterial nature of Tapleys Hill Road.

11.10.7 Road Transport Integration

Alterations to access points surrounding the petrol filling station are anticipated with any future expansion, including a new left-out access onto Tapleys Hill Road. Additional access points are possible on land fronting Military Road and will be considered on an as-needs basis.

11.11 Morphett Precinct

11.11.1 Development Extent – Existing

As outlined in Chapter 7 – Land Use Planning, the Morphett Precinct has been expanded to include the former Holdfast Precinct and part of the Runways Precinct to the north of the Brownhill-Keswick Creek easements. Within this amalgamated precinct, there is currently a show jumping club, an aquifer storage and recovery facility, and a steel fabrication and engineering business. To the north of the Morphett Precinct are AsA Radar and fire-fighting facilities.

11.11.2 Development Extent – Projected

Within the period of the Master Plan, envisaged development includes freight and distribution activities, office/warehousing, and the associated infrastructure including roads, water, power and telecommunication services. Temporary radar facilities are also provided on a site dedicated for this purpose to the western end of the precinct.

11.11.3 Scale of Development 0-5 Years

It is envisaged that approximately 5,000m² of office/warehousing space could be developed over the next 5 years on land fronting onto James Melrose Road adjoining the Manuele Engineering complex. A further 20,000m² of office/warehousing and distribution facilities are possible to the north of the Brownhill-Keswick Creek easement dependent upon demand.

11.11.4 Employment Aspects 0-5 Years

In consideration of the scale and nature of the earmarked Morphett Precinct developments, there is forecast an increase of approximately 367 FTE employees during this period. The direct contribution to GSP is forecast to increase by \$82 million.

11.11.5 Environmental Considerations 0-5 Years

The environmental considerations for the future developments in the Morphett Precinct include the following.

Energy and Water Resources

To reduce reliance on potable water, AAL has negotiated a recycled water point with SA Water that can service both new development and existing activities in terms of irrigation. This has also the potential to water the Runways Precinct related to grassed runway verges.

Noise

Comprehensive noise modelling has been undertaken of general industrial activities to occur in the Morphett Precinct, with resultant outcomes showing operational suitability on a 24-hour per day, 7-days per week basis, assisted by the construction of acoustic walls and gates facing James Melrose Road. Monitoring of ongoing operations will continue to ensure noise levels are suitably contained consistent with Section 10.9.1 of the Environment Strategy.

Soil, Groundwater and Stormwater

The storage and handling of fuels, oils and chemicals associated with projected developments have the potential to contaminate soil and groundwater if proper storage facilities and management practices are not adopted.

As stormwater runoff can increase proportionately with paved surface area, car parks and other vehicle traffic areas associated with new development has the potential to contaminate stormwater. Stormwater collected from these developments will be directed into interceptor units to assist in reducing contaminant loads into the off-airport drainage system consistent with management actions outlined in Section 10.9.4 (Chapter 10).

Local Air Quality

Industrial and aviation-support facilities may house machining, painting or other processes that generate air emissions. Controls for point-source emissions will be designed to meet regulatory air quality criteria and reviewed consistent with criteria included at Section 10.9.2 of Chapter 10.

Contamination

The sites of an existing and former AsA fire training ground have evidence of PFOS/PFOA contamination, and soil and groundwater is currently under assessment in conjunction with the AEO at the existing operation. AsA has been approached to conduct similar monitoring over the former site, leading to its earliest possible remediation.

11.11.6 Community – Relationships to State/Local Planning

The Morphett Precinct industrial land is specified as development ready employment land in the State Government's *30-Year Plan for Greater Adelaide* and the *Housing and Employment Land Supply Program 2010*.

11.11.7 Road Transport Integration

The existing access to land south of the Brownhill-Keswick Creek easement is accessible from James Melrose Road, with future development land to the north accessed through an airport roadway, alongside the Manuele Engineering complex. Future linkages between Morphett / Deeds Road and Richmond Road at the Airport East Precinct are possible, consistent with policies included in the *State 30-Year Plan for Greater Adelaide*, and a reservation of a land corridor for such purposes sought by the State Government in 2009.

11.12 Airport East Precinct

11.12.1 Development Extent – Existing

The Airport East Precinct has been substantially cleared over time and includes both paved and unpaved road infrastructure for vehicular access to the precinct. Existing development in the Airport East Precinct consists of primarily industrial premises and warehousing facilities.

11.12.2 Development Extent – Projected

Future developments are expected to include freight and distribution facilities, warehousing, air freight facilities, hangars, car storage facilities and aviation-related support industries.

11.12.3 Scale of Development 0-5 Years

It is envisaged that approximately 44,000m² of new built form could be developed over the next 5 years. This estimate is principally based on future airport aviation growth, aviation-related support industries, such as freight cargo and hangars, and market-driven industrial demand. Furthermore, this is in part related to the relocation of similar activities from the Terminals & Aviation Policy Area to make way for the future expansion directed at passenger growth.

11.12.4 Employment / Economy Aspects 0-5 Years

There is a forecast increase of 260 aviation-related employees and 478 non-aviation-related employees within the precinct based on the identified future development. An overall increased direct contribution to GSP of \$164 million is estimated as a result.

11.12.5 Environmental Considerations 0-5 Years

Energy and Water Resources

As noted previously, to reduce reliance on potable water, AAL has negotiated a recycled water take-off point with SA Water which can service both new development and for irrigating nearby community parks. In addition, use of treated stormwater is anticipated from the Adelaide Airport Stormwater Scheme developed by SA Water.

Noise

Possible sources of noise relative to aircraft activities associated with the proposed hangar development include aircraft taxiing and parking, ground running of aircraft engines and auxiliary power units. Other potential noise sources could result from the operation of motor vehicles associated with the use of the hangars, aviation-support industry and office/warehousing uses.

However, the protective earth buffer adjacent Watson Avenue reduces noise emissions within the accepted standards and criteria on a 24-hour per day, 7 days per week operational basis, as shown through past specialist acoustic modelling. Design and construction associated with new developments will be subject to further noise modelling and assessment, with additional attenuation controls to be put in place if required (see Section 10.9.1 of Chapter 10).

Soil, Groundwater and Stormwater

Proposed developments have the potential to contaminate soil, groundwater and stormwater resulting from aircraft and vehicle operations. Parking can result in fuel spills and leaks, while maintenance and refuelling operations can result in accidental spillages. The storage of fuels, oils and chemicals has the potential to lead to stormwater contamination if proper storage facilities and management practices are not in place and implemented.

Stormwater from aprons and other vehicle pavement areas will be directed into underground interceptor units to assist in containing spills and reducing contaminant loads into the off-airport drainage system (refer to Section 10.9.3 of Chapter 10).

Local Air Quality

Air emissions may be generated from aircraft auxiliary power units, mobile diesel generators and motor vehicles moving around the apron areas or associated with aviation-support and warehousing activities. Air emission monitoring will occur consistent with current airport environmental practices, as outlined in Section 10.9.2 of Chapter 10.

11.12.6 Community – Relationships to State/Local Planning

The industrial land within the Airport East Precinct is specified as 'development ready employment lands' as noted in the *30-Year Plan for Greater Adelaide* and the *Housing and Employment Land Supply Program Report 2010*; again highlighting the importance of the airport in contributing to employment opportunities.

11.12.7 Road Transport Integration

The current roadway access is from Richmond Road, with roadway enhancements expected for new roadways throughout the precinct coinciding with new development. Linkage through the adjoining Netley Commercial Park to Marion Road may be provided to allow for the future inter-connection to Morphett and Deeds Roads at North Plympton, complementing a strategy outlined in the *State 30-Year Plan for Greater Adelaide*. A new roadway link along the eastern side of the airport, from Richmond Road to the Export Park Policy Area, to enable taxi and controlled commercial vehicle access is also proposed as included in the *State Integrated Transport and Land Use Plan (2013)*.