

PARAFIELD AIRPORT LIMITED

Landscape Guidelines



Contents

Introduction

Objectives

Landscape Guidelines

- Site Location and Context
- Site Character
- Usage
- Landscape Precincts
- Open Space
- Access and Circulation
- Geology and Soils
- Water and Drainage
- Biodiversity and Ecology
- Sustainability
- Ornithological Conditions
- Planting Selections and Themes
- Softscape Works
- Hardscape Works
- Services
- Irrigation
- Streetscapes
- Carparks
- Landscape Buffers

Maintenance

Species Lists

- Local Natives
- Australian Natives
- Exotic

Water Matrix

Landscape Checklist

Glossary

Airport Landscape Guidelines compiled by
Oxigen Pty Ltd
7-11 Moger Lane
Adelaide SA 5000
ph 81327200 fx 8223 4966
www.oxigen.net.au
08.049



Introduction

The airport landscape guidelines provide a set of standards to be used when planning, constructing and maintaining landscapes within the airport sites.

The standards provide the minimum benchmarks and expectations set by Parafield Airport Limited (PAL) relative to the landscape character and usage zones defined within the guidelines documentation. This ensures that the allocation of time, budgets and resources responds to an appropriate level of intervention and ongoing care that is site specific.

Relevant Documentation

The landscape guidelines support the objectives of the Airport Master Plan and defines the responses required to meet the ongoing operational and functional needs of a major air transport hub.

The following relevant documentation may provide additional assistance and information.

- Adelaide Airport Master Plan 2004
- Parafield Airport Master Plan 2004
- Sustainability Policy (AAL + PAL)
- Adelaide Airport Environment Strategy 2004
- Parafield Airport Environment Strategy 2004
- AAL Building Approval Guide
- Application Package - Building Activity
- Airports Act 1996
- Airports (Environmental Protection) Regulations 1997
- Environmental Protection and Biodiversity Conservation Act 1996

Factsheets

- Safety and Bird Management
- Bird Strike Risk Surrounding Airports - For Racing Pigeon Owners
- Recycled Water
- Storm Water

Landscape Guidelines

The landscape guidelines define the minimum expectations that are required for development and building approval. All plans should be prepared by a landscape architect or qualified landscape designer. Plans must:

Be at a recognised scale (1:100, 1:200, 1:500) suitable for the size of the development

- Contain details of all hardscape and softscape materials.
- Contain plant lists including provenance, source, size and density.
- Contain a correct north point and submission date.
- Provide a project description and location plan
- Contain full contact details of applicant/s and details of any relevant consultants.
- Contain sufficient notations and legends to accurately describe all parts.

Objectives

The Parafield Airport landscape guidelines have been prepared to provide guidelines for proposed developments and ensure the procedures for applications and approvals are legible and understood.

The landscape guidelines provide the minimum expectations and standards that apply to all landscape works within the site.

The landscape guidelines are in accordance with Commonwealth legislation (Airports Act 1996), PAL's environmental obligations, legislation and the visual and functional expectations of the local community.

Relevant Legislation:

- Airports Act 1996
- Airports (Environmental Protection) Regulations 1997
- Environmental Protection and Biodiversity Conservation Act 1996.

The landscape guidelines are cognisant of both ongoing maintenance requirements and the availability of resources.

Character

Landscape works contribute directly to the character and identity of the site and the experience of users. The guidelines provide consistency and enhance the distinctive character of the airport.

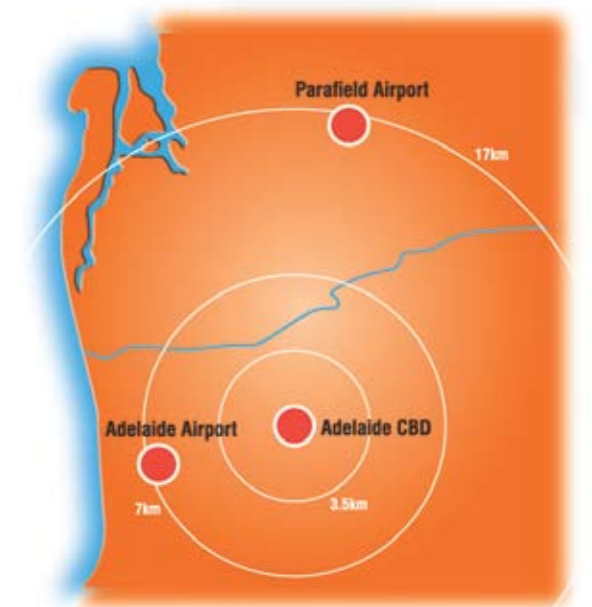
One of PAL's key objectives is to integrate the principles of sustainable development, economic viability and operational efficiency into decision making at all levels and communicate these to our stakeholders.

Sustainability

The Airport is committed to providing sustainable landscapes that contribute to biodiversity, manage water resources effectively, reduce energy requirements and minimizes waste production.

Ecology

Improving environmental conditions within the open space and effectively controlling ecology adds to the contribution of the site within a wider context of the Adelaide region and related catchments.



Airport locations

Function

Landscape works support the operational and functional requirements of air transport and facilitate movement and controlled access to facilities.

Aviation safety is paramount to all activities occurring within the Airport.

Management

Effective management will ensure new works are consistent with objectives and provide resources to maintain an appropriate quality standard.

Landscape Guidelines

The landscape guidelines provide the general intent and minimum requirements for landscape works within the airport site.

The landscape guidelines have been compiled and structured according to the following element headings that should be addressed in all landscape designs.

- Site Location and Context
- Site Character
- Landscape Precincts
- Open Space
- Access and Circulation
- Geography and Soils
- Drainage and Water Movement
- Biodiversity and Ecology
- Sustainability
- Ornithological Conditions
- Planting Selections/Themes
- Softscape Works
- Hardscape Works
- Services
- Irrigation
- Streetscapes
- Carparks
- Landscape Buffers
- Maintenance

Landscape Guidelines

Site Location

Parafield Airport is situated on the Northern Adelaide plains and covers an area of approximately 437 hectares. The site is predominantly open airfield space (grassland) with runways, hangarage and training facilities.

The site is bounded by Kings Road, Main North Road, Elder Smith Road and the Adelaide -Gawler Railway Line.

Parafield Airport is located 18 km north of the Adelaide city centre and is within the City of Salisbury local government area and the federal electorate of Port Adelaide.

The Parafield Airport site was established in 1927 with a focus on passenger and training services. The airfield operated as Adelaide's Civil Airport until the current Adelaide Airport site opened in 1955.

During World War II, Parafield Airport was used by the RAAF as a Flying Training Unit using mainly Tiger Moth aircraft, with occasional use by a heavier general service aircraft such as the Liberator Bomber.

Site Context

The Parafield Airport site is thought to have originally consisted of a mixture of samphire areas and lightly wooded plains with riparian zones in water courses.

With the leveling and filling of low areas the resultant soil profiles over the site are quite variable. The water table fluctuates, but generally occurs at a depth of between 0.75m and 2m.

The south-west corner of the airport is a low point and drainage is directed to this areas via overland flow and grassed swales.

The topography of the area is defined by the Para Fault escarpment, which forms the backdrop that is less than 2 km east of the airport. Bounding the western edge of the Ranges, an alluvial slope extends westward for several kilometres and forms a transitional relief between the higher slopes of the ranges and the broad coastal plain.



Location Plan

Usage

Parafield Airport is the primary aviation training facility for Adelaide. A range of civil and charter businesses also operate from the site with a high volume of daily traffic.

The site also includes parking for over 200 fixed wing planes (fixed wing).

The Control Tower operates from 0800 to 1800 daily. The Parafield Control Zone is between the Adelaide Control Zone to the South and Edinburgh Military Control Zone to the North.

The Commercial Estate is the most recently developed precinct of the airport, providing approximately 17 hectares of serviced commercial land in the north east corner of the airport.

The Commercial Estate is expected to expand into the Levels Precinct in the future providing a consistent built edge to the eastern side of the site.

The Parafield site also contains an aviation museum which is open to the public.



Pilot Training Facilities

Features

Classic Fighter Jets Museum

A collection of over fighter jets including Tiger Moth, Sabre, Jindivik, Mirage and cockpit and missile displays open to the public at select times.

University of South Australia Aviation Academy

The UniSA Aviation Academy caters to students studying the Civil Aviation degree.

SA TAFE campus

The TAFE Parafield campus offers training for both aviation mechanics and pilot studies.

Landscape Precincts

Landscape Precincts are grouped according to the Master Plan precincts for ease of use.

- Kings Precinct
- Central Precinct
- Runways Precinct
- Commercial Precinct
- Cross Keys Precinct
- Levels Precinct
- Bennett Precinct



Landscape Precincts

Kings Precinct

The Kings Precinct is formerly an agricultural zone with major storm water infrastructure along the northern boundary. A stormwater harvesting scheme operates within this precinct improving water quality and storing for reuse.

Central Precinct

The Central Precinct is the main administrative and functional zone with a range of public and private facilities and commercial offices.

Runways Precinct

The runways precinct is 'airside' and is primarily open grassland and bitumised runways for aircraft. This precinct is controlled and managed by PAL. A conservation zone for the Vernal Pools is also located within this precinct.

Commercial Precinct

The Commercial Precinct is a newly developed zone adjacent Main North Road featuring a range of commercial and retail public facilities.

Cross Keys Precinct

The Cross Keys precinct is now accessible via Elder Smith Road with future works including Enterprise Park and connection to the nearby Railway corridor. A conservation zone for the Vernal Pools is also located within this precinct.

Levels Precinct

The Levels precinct provides open space for future recreation and commercial facilities with high exposure to Main North Road and Elder Smith Road. This open space also features the site for the proposed recreation of the 'Parafield Trees'. The 'Parafield Trees' are trees arranged to form the word Parafield when viewed from the air.

Bennett Precinct

The Bennett Precinct features open space bisected by Elder Smith Road. Shallow depressions within the landform provide Vernal Pools and an associated ecology.

Open Space

Parafield Airport occupies a large open space in the northern Adelaide plains.

Secondary open space includes the St Kilda Mangroves and the Penrice salt pans, public reserves and school sporting ovals.

Major streetscapes also contribute to open space where the road width allows for wide footpaths, verge and street tree planting including Main North Road, Kings Road and Salisbury Highway.

1. St Kilda Mangroves

2. Bolivar Water Treatment Works

3. Penrice Salt Pans

4. Little Para River

5. Globe Derby

6. Community Reserves + School Ovals

7. Major Streetscapes

Main North Road

Salisbury Highway



Access and Circulation

- Access should provide clear and legible entry to sites.
- Driveways should provide for relevant vehicle turning circles and be located to provide a clear view of incoming traffic.
- Carparks should provide appropriately defined car parking spaces and provide clear pedestrian routes.
- Canopy trees are recommended to provide shade for vehicles.
- Indicate how to report maintenance or vandalism problems.
- Indicate where to go for assistance.
- Identify main routes for pedestrians and indicate in direction of travel in the ground surface.
- Explain time restrictions for entries/exits at the entrances to the route.

The following Crime Prevention Through Environmental Design (CPTED) Principles apply to all landscape works:

Sightlines

- Pedestrians should have a clear view of surrounding areas
- Fencing and kerbing should not restrict vision
- Landscape features should be considered for sizes at maturity and density of tree crowns.

Lighting

- All lighting is to comply with Civil Aviation Safety Regulations 1998 Part 139 Manual of Standards (MOS 139) and in accordance with AAL electrical standards.
- All pathways, connections, access routes and signs should be lit to Australian Standards (AS1158)
- Lighting should be controlled to reduce upward reflection and nuisance glare for aircraft.
- Lighting should reduce the contrast between areas of shadow and brightly illuminated areas.
- Light fixtures should be robust and provide ease of access for maintenance.
- Low energy fittings and alternative power sources should be considered for all external lighting.
- Lighting should be appropriate for the functional and operational requirements of the site.

Signage

Signs should:

- Clearly indicate the entry and exits to facilities and features.
- Be legible using distinct colours and use standard symbols for wayfinding.
- Be strategically located for visibility and reference points.

Good design and legibility will reduce the need for users to rely on signage to safely find their way around the site.

Space Definition

The location of landscape elements including garden beds, paving, lawns, bollard, street furniture, different ground surfaces, and changes in ground level provide both physical and psychological barriers and edges. These elements should consider the definition of public and private space and the relevant access control appropriate for the site.

Fencing

Fencing styles should be of open construction rather than solid. The use of spaced timber battens, steel rod, or open mesh provides security and allows for surveillance from external areas.

Subject to the location of fencing, the Department of Transport, Energy and Infrastructure, Regional Development and Local Governments standards will need to be complied with.



Entry Walls

Geology and Soils

The airport is situated towards the distal edge of the alluvial slope of the Mount Lofty Ranges, and immediately north of the outwash fan of Dry Creek.

The Dry Creek is ephemeral in nature and has limited flow throughout most of the year. Prior to construction of the airport, the site was used predominantly as grazing land.

Previous investigations suggest that the natural soil profile consists of reddish brown clays and sandy clays

The plasticity of the soils ranges from medium-high to low-medium, and are generally thought to have a hard consistency with varying moisture content.

The soil groups associated with the Pooraka formation consist predominantly of alluvial or fluvial clays, which are sometimes calcareous. They may contain sediments of marine origin due to the former marginal marine environment of the site.

General Review

All site soils will benefit from the inclusion of organic matter to increase the level of nutrients within the soil, improve aeration and increase water holding capacity.



Existing Site Soils

Water and Drainage

Storm Water

Storm water management is a critical issue for PAL, guided by the commitments listed in the Airport Environment Strategy 2004. Our goal is to improve the quality of storm water leaving the airport.

PAL is achieving this by working in partnership with tenants, local government and the Adelaide and Mount Lofty Ranges Natural Resource Management Board to better manage the storm water drains that pass through the airport.

Catchment Water

The airport site also receives water from the larger surrounding catchment due to its low lying profile.

Drainage

The airport lies at the downstream end of several regional rainfall catchment areas. The major drainage lines surrounding Parafield Airport consist of:

- The Main North Road Diversion Drain

This drain collects the flows generated by the catchment area to the east of Main North Road which cross Main North Road via piped systems.

- The Bennett Road Drain

This drain runs along the southern boundary of the airport site, and collects the surface flood flows which drain in a southerly direction along the eastern side of Main North Road. Bennett Road represents the lowest point in this area and therefore major flood flows will tend to gravitate towards the Main North/Bennett Road junction.

- The Airport West Drain

This flows down the entire western side of Parafield Airport and collects portions of the airport catchment together with the greater Salisbury South area to the north of the airport.

- The Kings Precinct Drain -

This drain is an enclosed pipe system beneath the runways which discharges into an open unlined channel system which gravitates to the Airport West drain.

Water Use

There is a preference for on site capture and storage of all storm water. Where this is not possible storm water shall be diverted to grassed swales and detention areas to provide filtration and aeration of the water prior to discharging from site.

Where possible, storm water should be stored on site to be used for irrigation

Water carts should also be used in locations where recycled water is not available.

New Development

All new developments have associated storm water detention basins to allow water to flow efficiently into the surrounding drains. New developments also require the installation of storm water interception devices that help prevent sediment, litter and other gross pollutants entering the storm water system.

Biodiversity and Ecology

Parafield Airport is situated on the floodplains of Dry Creek and the Little Para River.

The Parafield site has been used for airport operations since 1927. As a result of the increase in use and capacity, the site has changed from a grassed field to a network of aircraft pavements. Areas adjacent to the airfield were historically used for grazing and cropping, however most areas adjacent to Parafield airport are now residential or commercial.

It is expected that high levels of nutrients including phosphorus are remnant within the site soils from former agricultural uses. These levels will reduce over time with leeching and dilution from storm water.

Flora and Fauna

No nationally significant flora species have been identified on the airport.

Flora and fauna studies conducted since 1999 over the entire airport have identified the following significant species that are listed under State legislation:

- *Maireana decalvans* (Black Cotton Bush)
Status - Endangered
- *Juncus Radula* (Hoary Rush)
Status – Vulnerable
- *Sclerolaena muricata var. villosa* (Five-spine Bindyi)
Status – Rare
- *Eragrostis infecunda* (Barren Cane-grass)
Status – Rare
- *Pilularia novae-hollandiae* (Austral Pillwort)
Status – Rare
- *Rumex dumosus* (Wiry Dock)
Status – Rare

Flora surveys have identified these plants as being found at a multitude of locations throughout the airport and not in discrete populations or communities.

No nationally-or state significant fauna species have been identified on the airport.

Vernal Pools

A number of existing and reconstructed shallow basins exist on the southern edge of the airport site within the Bennett Precinct. These ephemeral water bodies are referred to as Vernal Pools and provide standing water for longer periods of time due to impervious subsoils.

The Vernal pools support an ecology of invertebrates and flora. Further research into the localised biodiversity is being undertaken.

Several significant flora species are located within the Vernal Pools area under State Legislation. PAL is committed to conserving the Vernal pools and monitoring the success of several relocated pools, which were moved as a result of the new road.



Vernal Pools

Sustainability

PAL is committed to providing sustainable landscapes adopting systems that are practical, cost effective, contribute to biodiversity and consume minimal resources.

The following key principles are to be considered:

Airport landscapes:

- meet aviation safety standards (MOS 139)
- are well designed to suit the local environmental conditions.
- contain plants that require minimal additional water than natural rainfall provides.
- contain plants that are not invasive in the location and will become environmental weeds.
- employ practical water conservation measures such as mulch to conserve soil moisture, efficient irrigation and grouping plants with similar water needs together.
- provide habitat for local native fauna such as butterflies, bats, lizards and frogs.
- uses little if any pesticide or chemical that could harm natural insect populations and other beneficial organisms, or could contaminate soil and waterways.
- minimise the use of fuel-powered devices such as use of lawn mowers and power tools, and uses local materials and products to reduce transportation.
- carefully selects materials and products that, in their acquisition or production, do not threaten or damage vulnerable ecosystems. Unsustainable materials may include moss rocks, pebbles or wood collected or harvested from wild landscapes.

Design:

- Seek to maximise existing site features such as available shade trees
- Minimise hard heat absorbing surfaces
- Design to protect hard surfaces from excessive sunlight
- Incorporate porous paving where possible to allow water to permeate
- Where possible, collect and retain water from roofs and/or hard surfaces for reuse on planted areas
- Design with consideration of the needs of vulnerable local fauna such as bats, butterflies, small birds, small lizards, beneficial insects, soil fauna

- Design for low energy and chemical use in maintenance
- Use recycled rubbles and concretes in construction of hard surfaces
- Use recycled plastics and timbers in markers, bollards and in furniture
- Recycle materials from the site itself or nearby sites for use in construction where possible.

Plants:

- Use plants requiring minimal water in summer other than natural rainfall, including any grass selected for lawn areas
- Minimise lawn areas (by placing them only where they will be utilized) and, where the 'lawn aesthetic' is required, use drought tolerant groundcovers
- Trial arid land plant species in dry areas
- Use plants that will not become invasive in the location or in sensitive nearby areas such as waterways or bushland
- Use at least some local indigenous plants from local provenance seed
- Consider the habitat value of plants including appropriate food, shelter and breeding habitat

Water Conservation:

- Use subsurface irrigation where irrigation is necessary
- Use soil moisture detection devices to ensure plants are only watered when necessary
- Group plants with similar water needs together
- Collect and reuse water collected on site if possible
- Utilise recycled water for irrigation where possible
- Use mulch on garden beds



Native Grasses

Sustainability

Habitat:

- Consider adjacent habitat and protect its integrity
- Consider the location of the site in relation to wildlife and water corridors
- Provide some degree of habitat for vulnerable local fauna such as bats, small insectivorous birds, butterflies, beneficial insects and soil fauna in any planting mixes.
- Where possible protect vulnerable fauna from introduced predators such as cats, dogs and foxes
- Consider lighting and the effect of night light pollution on local fauna

Chemical use:

- Consider alternative methods of controlling pest plants and animals
- Use minimal quantities of low toxicity pesticides
- Where soil additives are considered necessary, use organic rather than synthetic fertilizers and other products
- Minimise the need for chemical use in maintenance
- Avoid the leaching of chemicals into soil and water

Energy use:

- Consider and avoid where possible the need for energy use in site maintenance, such as fuel or electricity powered equipment
- Use locally sourced products to reduce embodied energy costs in transportation
- Use lighting powered from renewable sources where possible
- Consider the potential for using renewable energies for energy requirements on site

Materials and products:

- Recycle materials from the site itself or nearby sites to use in construction
- Use recycled rubbles, plastics and timbers in construction and in furniture
- Use locally sourced products
- Avoid using rocks, pebbles, timber or other materials collected from wild landscapes



Parafield Windsock

Ornithological Conditions

Vegetation and Birds

In the management of the airport, consideration must be given to existing and potential problems with birds. There are a number of species that are currently recognised as being hazardous to Airport operations. These include a variety of water birds (silver gull, ducks and herons) and some terrestrial species (galah, domestic pigeon, Australian magpie and kestrels).

Landscaping and replanting programs, therefore, should not produce habitats or resources that may cause these birds to increase in number at the Airport and therefore pose a risk to aviation safety.

Predicting the response of birds to habitat modification is difficult, but is made easier with the use of local native species in natural planting arrangements. Bird response in and around the existing native vegetation is often already available for the Airport.

Block planting of a single species should be avoided. Although an individual plant species may not be attractive to birds by itself, if planted en masse it may provide enough of a food source or a suitable habitat for certain birds.

Anything that resembles a line or corridor of vegetation should also be avoided if it has the potential to channel birds near to or across flight paths. This philosophy includes uniform avenues down roads and lines of screening vegetation.

Any development and planned landscaping must involve responsive management to the point of developing contingencies to deal with unforeseen bird issues that may arise.

Significant landscaping proposals will be subjected to a risk assessment for bird attraction.

Where problems develop the most likely action would be the removal or replacement of troublesome plant species. Landscape designs for the Airport therefore need to be sufficiently flexible and diverse in species composition to allow these adjustments to be made without having to destroy the landscape and start again.

Trees

Trees that attain significant heights should be avoided due to the risk of penetrating the Obstacle Limitation Surface as required under MOS 139. Large trees with open canopies provide perches for problem bird species.

The following plants are examples of large trees that should not be planted under any circumstances:

- Eucalyptus camaldulensis,
- Eucalyptus citriodora,
- Eucalyptus cladocalyx,
- Eucalyptus occidentalis,
- Casuarina glauca;
- Phoenix canariensis
- Phoenix dactylifera

These species have very open crowns at maturity, produce suckering growth or attract specific bird species.

Similarly, deciduous trees can provide favourable perching areas during winter months; their use should also be restricted around the Airport.

Other large trees that should be avoided are those that produce substantial amounts of nectar when flowering (eg. Eucalyptus leucoxylon ssp. leucoxylon) or edible fruit (eg Ficus macrophylla). Species that have dense canopies, erect posture (thus reducing perching due to a lack of horizontal boughs) and are relatively non-floriferous and set little edible fruit should be used in preference to other species, where possible

Shrubs and Bushes

Most shrubs and bushes do not provide enough nectar or fruit by themselves to support a bird. Mixes of species should be used so as not to provide a wealth of food at any one time.

Ornithological Conditions

Grasses and Groundcovers

The use of groundcovers is as for shrubs. Any groundcover that is a potential food source should be used in a mixture of species and not used solely to cover a large area. Care should be taken in choosing grasses for lawn. For example, Kikuyu Grass is used extensively as a food source by Galahs during winter and should be avoided where possible.

Aquatic Plants

Aquatic plant selections must provide rapidly establishing species to minimise open water and limit the attractiveness for bird nesting sites.

Obstacle Limitation Surface

The OLS is a series of surfaces that set the height limits of objects around an aerodrome as per MOS 139.

The airspace around the aerodromes of the Airport is to be maintained free of obstacles so as to permit the intended aircraft operations to be conducted safely. Any object that projects through the OLS becomes an obstacle and represents a hazard to aircraft operations, thereby compromising the safe and economical operations of the aerodrome.

With respect to landscaping around the Airport, the OLS only affects plantings in specific areas in proximity to the runways. Each landscaping application will be reviewed on its own merits with respect to OLS penetration.



Training Aircraft

Planting Selections and Themes

Selection

Appropriate plant selection is a key element of landscape works. Plants must be selected against the following criteria:

- Minimal water requirements
- suitability for climate
- suitability for rainfall
- suitability for soil conditions
- compatibility with existing landscapes

Climate and Rainfall information specifically relating to the Airport is available from the Australian Bureau of Meteorology website.

www.bom.gov.au

Planting shall be appropriate for the Adelaide plains and for the intended use of the site.

Plant selections should be in accordance with the species lists provided in these guidelines.

Planting densities shall be varied according to the location and siting of beds and provide an appropriate level of vegetative cover to all planting zones.

Mature tree heights and spreads shall be taken into consideration at the time of planting to ensure mature species are healthy and are not overcrowded reducing the longer term maintenance of the site.

All planting shall be carried out in accordance with best practice techniques to ensure the highest likelihood of survival.

Plant Sizes

Container Size	Plant Type
Cell	Aquatic Species and Native Grasses
Tubestock	Native Grasses, Groundcovers, Shrubs and Trees
Pot (150-200mm)	Native and Exotic species
300mm (Springring/Rocket Pot)	Trees to 2.5m high
45L - 100L	Advanced and Mature Trees

All tree supply shall be in accordance with NATSPEC Guide: Specifying Trees – a guide to assessment of tree quality (Clark R. 2003).

Softscape Works

In order to provide the best outcome for planting areas the following softscape elements are to be considered:

Preparation

Planting beds and grassed areas shall be cultivated to the following minimum depths to aerate the soil and break up compaction.

Turf	150mm
Planting beds	300mm

Mulch

The use of recycled green organics is recommended in accordance with Australian Standards.

Planting beds are to provide a minimum 75mm depth of mulch to retain soil moisture and suppress weeds.

Use of gravel and pebble mulches is also recommended with suitable edging to ensure containment of loose material.

Soil Conditioning

Any importation of topsoil onto airport grounds requires pre-approval from the Environment Department. Conditioning of existing site soils is the preferred means to provide suitable growing media for plant material.

Existing site topsoil shall be stripped and stockpiled for reuse on site.

General improvements to organic content and leaching of residual chemicals, salts and minerals may also be beneficial.

Some works may require a site specific soil test please contact the Environment Department for more details.

Turf

Large areas of turf are to be avoided and turf species must be selected to suit the location and available water resources.

Seeding

Hydroseeding and Direct seeding is considered appropriate in large scale areas where broad coverage is required for dust suppression or revegetation.

Swales

The use of grassed swales is recommended to direct storm water and provide a first stage filtering of sediments and VOC's. All grassed swales require approval from PAL.

Hardscape Works

All hardscape works are to complement existing designs in proximity to new works.

Paving and Pathways

Unit paving shall provide high quality and level surfaces for building surrounds and pathways. Recycled aggregates are preferred subgrade materials.

Concrete paving is appropriate for plaza and courtyard spaces with washed aggregate, broomed and trowelled finishes.

Bitumen is appropriate for vehicles areas including carparks, driveways and crossovers.

Gravel is appropriate for informal pathways, planting bed mulch and must be restrained by appropriate edging.

Hard Surfaces

Timber - Recycled hardwoods or sustainably managed plantation timbers are appropriate for decking and furniture.

Concrete - Recycled aggregates and non-slip finishes including washed, shot blasted and stiff bristled broom finish

Steel and Aluminium - Recycled content and durable material suitable for structures, battens and fencing

Edge Treatments

Formed concrete edges or haunching are appropriate for paving and garden bed edges. Steel reinforcing may be required where vehicle traffic may be expected.

Galvanised steel edging is appropriate for edging between pathways and surrounding surfaces. Concealed pins and fixings are recommended.

Spade edges are suitable for large scale mulched beds where the edges can be controlled through spraying.

Street Furniture

Street furniture shall be selected for robust design, low maintenance requirements and the presentation of a consistent high quality public image.

Seating

Seats shall provide comfortable seating and be appropriate for internal and external use. Preference is for hardwood battens and steel frame and options for the inclusion of armrests.

Benches shall provide comfortable seating and be of appropriate length for the location and expected duration of use. Preference is for hardwood battens and steel frame.

Bins and Waste Disposal

Bins and bin surrounds shall be selected for robust design and ease of access for maintenance. The addition of cowls or hoods is required to control the size of waste objects. Clearly designated recycling options are to be used to separate waste material.

Bollards

Bollards are to be used to direct traffic and to provide protection for users and features. Hardwood bollards and Removable/Drop Down Steel bollards are appropriate for use.

Bicycle Racks

Bicycle racks are an important element to promote health and alternative transport within the site. Preference is for individual stainless steel hoops setout according to Australian Standards.

Drinking Fountains

Drinking fountains are to be of robust design and to allow for equitable access.

Tree Protection

Tree protection may be provided by grills and barriers in areas where the risk of damage from vehicles and machinery is expected.

Hardscape Works

Planter Boxes

Planter boxes are to be of appropriate size and proportion for the location and species selection. Drainage of planter boxes and connections to sewer and storm water must be incorporated within the design.

Structures

Shade and shelter structures provide protection from both wind and sun. Details of materials, proportions and fixing methods must be provided for approval. Building and development approval may also be required with certified engineering details.

Lighting

Lighting must be selected for both the appropriate level of illumination for external spaces and in accordance with Airport standards for limiting the upwards deflection of light.

All lighting must also be MOS 139 compliant.

Pathway lighting may be provided to allow use of select pathways at night. Low energy fittings and the use of solar power should be considered.

Feature lighting may be provided to building facades and landscape features in accordance with airport standards.

Water

External water features including fountains and reflection pools that rely on mains water are considered inappropriate within the airport without incorporation of water sensitive design features.

Areas of open water that will attract bird congregations are to be avoided.

Artworks

PAL encourages the identification of opportunities for temporary and permanent artworks that explore the themes of:

- aeronautical activity
- travel
- movement
- South Australian character
- iconic forms
- gateway features

Services

A variety of services exist within the Airport. Services may be above or below ground and may include:

- Water (Mains Potable and Recycled)
- Storm water
- Sewer
- Gas (High and Low Pressure)
- Electricity (High and Low Voltage)
- Communications including Telstra
- Fibre Optic
- Fuel Lines

Landscape works shall:

- allow access to inspection points, distribution boards, hydrants, transformers and serviceable parts for maintenance and emergency use.
- give consideration to the location of trees and underground services
- consider the mature heights of vegetation and any overhead cabling.
- use root control barriers where trees are placed within 1.3m of kerbs or other structures.

Excavation

Excavation permits are required for all excavations prior to any works within the airport grounds. Excavation Permits must be arranged through Parafield Airport Limited.

Irrigation

Irrigation of landscape works is to be assessed using the airport water matrix (see appendix) to ensure efficient and appropriate levels of water use are established and maintained.

The results of the water matrix assessment must be included in any landscape development application for approval.

Irrigation is to be used in accordance with best practice techniques and operated for hours and durations according to current Water Restrictions.

Standard proprietary fittings and accessories from a recognised manufacturer are to be used.

Irrigation plans must be submitted for approval prior to construction.

Water Source

Recycled water, storm water and harvested rainwater to be used where possible.

Controllers

Irrigation shall be automatically controlled and applied in accordance with soil moisture levels.

Dripline

Inline drip is to be used for planting bed areas and placed under mulch to minimise evaporation and deliver water to plant roots.

Sub surface

Subsurface irrigation may be used for areas of turf or garden beds. The extent of subsurface shall be identified and documented for review by AAL.

Sprinklers

Sprinkler head placement is to achieve full coverage and minimise overspray or covering of footpaths or roads.



Recycled Water Fittings



Recycled Water Irrigation

Streetscapes

Major Roads

Width: 8m
Speed: 50 kmph

- Dakota Drive
- Anderson Drive

Street tree planting in verge and median where appropriate. Check for service locations.

Low level shrubs and groundcovers to provide visual contrast

Allow for signage and footings.

Allow for lighting and services within corridor.

Minor Roads

Width: 6m
Speed: 50kmph

- Lawrence Hargrave Road
- Horrie Miller Avenue

Speed: 40kmph

- Lockheed Lane
- Mollison Road
- Butler Avenue
- Tiger Moth Lane

Street tree planting in verge where possible with an understorey of mulched beds.

Water sensitive urban design to capture and direct storm water using swales, pits and filtration beds.

Landscape works shall provide clear sight lines along roads and pathways.



Typical Streetscape

Carparks

Carparks provide opportunities for storm water capture and for the inclusion of feature landscaping. For many users of the site the relationship between the carparks and terminal and office buildings form the entire Airport experience.

Carparks shall therefore provide efficient movement and a high quality landscape amenity.

Landscape works shall use water wise native species that provide colour and interest and low ongoing maintenance.

The use of gravel mulch and automatic dripline irrigation is recommended to maintain a consistent and high quality landscape with a South Australian character.

Entries shall support signage and directional movement with low level planting and shade trees where appropriate.

Islands and traffic medians shall allow for clearly designated pedestrian movement.



Carpark Median Planting

Landscape Buffers

Landscape buffers are utilized to provide screening from activities and services and to provide visual separation within the site.

Buffers provide an important transition zone and may also provide a beneficial wind break depending on tree species and the planting density.

The use of native plant species increases the biodiversity potential and allows for accessible open space for the public.

Landscape buffers also incorporate storm water and drainage corridors that control the movement of water through the site.



Kings Road Buffer Planting

Maintenance

Maintenance is an important part of all landscape works and ensures the consistent quality of the airport environment.

Maintenance is targeted to an appropriate level for all precincts to ensure that resources and funding are allocated in an efficient and functional manner.

The appropriate level of maintenance is identified with the following criteria:

- location of site
- visibility and exposure
- landscape treatments and expected condition
- available resources

The airport contributes to the experience of visitors and residents and is a statement and reflection of South Australia values.

The landscape contributes to this statement and reflects both a local context and character through plantings and material selection. Maintenance is required to ensure this character is sustainable and consistent over time.

Precinct	Maintenance Level	Detail
Central	Medium	Garden Beds, Carparks, Medians, Verges, Street Trees, Entry Statements
Kings	Medium	Street trees, Medians, Reserves, Stormwater Corridors
Runways	High	Grasslands, Runway linemarking
Cross Keys	Low	Grasslands, Revegetation, Buffers
Bennett	Low	Grasslands, Vernal Pools
The Levels	Low	Grassland
Commercial Estate	Low	Grassland

Species List

The following plant schedules provide species that are considered suitable for use within the airport.

Priority should be given to plant selections from local natives species. Non-local native species are a second preference followed by exotic selections.

These lists are provided as a guide only and additional species may be approved in consultation with PAL.

PAL encourages the choice of species from the following lists, however we are aware that from time to time there are problems with the use of these species such as:

- availability from suppliers;
- incompatibility with other species already present; and
- unsuitability in certain soil and environmental conditions.

Due to the factors above, PAL will consider the suitability of other proposed species which must be approved by PAL prior to planting.

Considerations such as plant origin, potential height and attractiveness to birds will be taken into account when making a decision on species selection.

Precinct	Suitable Planting Type	Landscape Areas
Central	Tree, Grasses, Groundcovers	Garden Beds, Carparks, Medians, Verges, Entry Statements, Street Trees
Kings	Trees, Shrubs, Grasses and Groundcovers	Street trees, Medians, Reserves, Gardens
Runways	Grasses and Samphires	Grasslands, Runway linemarking
Cross Keys	Trees, Shrubs, Grasses and Groundcovers	Grasslands, Revegetation, Screening
Bennett	Trees, Shrubs, Grasses and Groundcovers, Aquatics	Grasslands, Revegetation, Vernal Pools
The Levels	Trees, Grasses and Groundcovers	Shade Trees, Perimeter and Screen Planting.
Commercial Estate	Trees, Grasses and Groundcovers	Medians, Verges, Carparks

Species are provided in 3 categories:

- **Local Natives**
- **Australian Natives**
- **Exotic**

Plant Supply

A list of plant suppliers is also provided who can assist with plant selections particularly for endemic species that may have limited commercial availability due to demand.

- Provenance Indigenous Plants
- Coromandel Native Nursery
- Salisbury Nursery
- Indigeflora
- Greening Australia
- Urban Forests

Local Natives

Scientific Name	Common Name	Family
Grasses + Groundcovers		
<i>Atriplex semibaccata</i>	Berry Saltbush	CHENOPODIACEAE
<i>Atriplex suberecta</i>	Lagoon Saltbush	CHENOPODIACEAE
<i>Austrodanthonia caespitosa</i>	Common Wallaby Grass	GRAMINEAE
<i>Austrodanthonia setacea</i>	Smallflower Wallaby Grass	GRAMINEAE
<i>Bulbine bulbosa</i>	Bulbine Lily	LILIACEAE
<i>Calostemma purpureum</i>	Garland Lily	LILIACEAE
<i>Carpobrotus rossii</i>	Karkalla	AIZOACEAE
<i>Chloris truncata</i>	Windmill Grass	GRAMINEAE
<i>Chrysocephalum apiculatum</i>	Common Everlasting	COMPOSITAE
<i>Cyperus gymnocaulos</i>	Spiny Flat-Sedge	CYPERACEAE
<i>Dianella revoluta</i> var. <i>brevicaulis</i>	Short-stem Flax-lily	LILIACEAE
<i>Dianella revoluta</i> var. <i>revoluta</i>	Black-anther Flax-lily	LILIACEAE
<i>Dichondra repens</i>	Tom Thumb or Kidney Weed	CONVULVULACEAE
<i>Dillwynia hispida</i>	Red Parrot-pea	LEGUMINOSAE
<i>Disphyma crassifolium</i> ssp. <i>clavellatum</i>	Round-leaved Pigface	AIZOACEAE
<i>Elymus scaber</i>	Common Wheat-Grass	GRAMINEAE
<i>Enchylaena tomentosa</i>	Ruby Saltbush	CHENOPODIACEAE
<i>Enneapogon nigricans</i>	Black-head Grass	GRAMINEAE
<i>Frankenia pauciflora</i>	Southern Sea-heath	FRANKENIACEAE
<i>Goodenia amplexans</i>	Clasping Goodenia	GOODENIACEAE
<i>Helichrysum leucopsidium</i>	Satin Everlasting	COMPOSITAE
<i>Hibbertia riparia</i>	Erect Guinea Flower	DILLENIACEAE
<i>Isolepis cernua</i>	Nodding Club-rush	CYPERACEAE
<i>Isolepis nodosa</i>	Knobby Club-rush	CYPERACEAE
<i>Juncus pauciflorus</i>	Loose Flower-rush	JUNCACEAE
<i>Juncus subsecundus</i>	Finger Rush	JUNCACEAE
<i>Kennedia prostrata</i>	Running Postman	LEGUMINOSAE
<i>Kunzea pomifera</i>	Muntries	MYRTACEAE
<i>Lavatera plebeia</i>	Australian Hollylock	MALVACEAE
<i>Lobelia alata</i>	Angled Lobelia	CAMPANULACEAE
<i>Lomandra densiflora</i>	Iron-grass	LILIACEAE
<i>Lomandra leucocephala</i>	Woolly Matrush	LILIACEAE
<i>Lotus australis</i>	Austral trefoil	LEGUMINOSAE
<i>Mimulus repens</i>	Creeping Monkey Flower	SCROPHULARIACEAE
<i>Myoporum parvifolium</i>	Creeping Myoporum	MYOPORACEAE
<i>Persicaria decipiens</i>	Slender Knotweed	POLYGONACEAE
<i>Persicaria lapathifolia</i>	Pale Knotweed	POLYGONACEAE

Scientific Name	Common Name	Family
<i>Poa poiformis</i>	Coastal Poa	GRAMINEAE
<i>Ptilotus polystachyus</i>	Long Tails	AMARANTHACEAE
<i>Samolus repens</i>	Creeping Brookweed	PRIMULACEAE
<i>Scaevola albida</i>	Fanflower	GOODENIACEAE
<i>Selliera radicans</i>	Swamp Weed	GOODENIACEAE
<i>Senecio lautus</i>	Variable Groundsel	COMPOSITAE
<i>Stipa elegantissima</i>	Elegant Spear-grass	GRAMINEAE
<i>Stipa flavescens</i>	Coast Spear-grass	GRAMINEAE
<i>Stipa hemipogon</i>	Half-beard Spear-grass	GRAMINEAE
<i>Stipa nodosa</i>	Smooth Spear-grass	GRAMINEAE
<i>Stipa trichophylla</i>	Spear grass	GRAMINEAE
<i>Suaeda australis</i>	Austral Seablite	CHENOPODIACEAE
<i>Themeda triandra</i>	Kangaroo Grass	GRAMINEAE
<i>Threlkeldia diffusa</i>	Coast Bonefruit	CHENOPODIACEAE
<i>Velleia paradoxa</i>	Spur Velleia	GOODENIACEAE
<i>Vittadinia blackii</i>	Narrow-leaf New Holland Daisy	COMPOSITAE
<i>Vittadinia cuneata</i>	Fuzzweed	COMPOSITAE
<i>Vittadinia gracilis</i>	Wooly New Holland Daisy	COMPOSITAE
<i>Wahlenbergia gracilis</i>	Sprawling Bluebell	CAMPANULACEAE
<i>Wahlenbergia litticola</i>	Bluebell	CAMPANULACEAE
Aquatic Plants		
Scientific Name	Common Name	Family
<i>Baumea juncea</i>	Bare twig-rush	CYPERACEAE
<i>Bolboschoenus caldwellii</i>	Salt Club-Rush	CYPERACEAE
<i>Eleocharis acuta</i>	Common Spikerush	CYPERACEAE
<i>Gahnia filum</i>	Smooth Cutting-grass	CYPERACEAE
<i>Juncus kraussii</i>	Sea Rush	JUNCACEAE
<i>Marsilea drummondii</i>	Common Nardoo	MARSILEACEAE
<i>Phragmites australis</i>	Common Reed	GRAMINEAE
<i>Schoenoplectus pungens</i>	Sharp-leaf Club-rush	CYPERACEAE
<i>Schoenoplectus validus</i>	River Club-rush	CYPERACEAE
<i>Trilochin striatum</i>	Streaked Arrowgrass	JUNCAGINACEAE
Shrubs		
<i>Acacia acinacea</i>	Gold-dust Wattle	MIMOSACEAE
<i>Acacia cupularis</i>	Coastal Umbrella Bush	MIMOSACEAE
<i>Acacia longifolia</i> var <i>sophorae</i>	Coast Wattle	MIMOSACEAE
<i>Acacia ligulata</i>	Umbrella Bush	MIMOSACEAE
<i>Acacia paradoxa</i>	Kangaroo Thorn	MIMOSACEAE
<i>Acacia victoriae</i>	Elegant Wattle	MIMOSACEAE
<i>Adriana klotzschii</i>	Coast Bitter-bush	EUPHORBIACEAE
<i>Alyxia buxifolia</i>	Sea Box	APOCYNACEAE

Scientific Name	Common Name	Family
<i>Bursaria spinosa</i>	Sweet Bursaria	CUNONIACEAE
<i>Correa reflexa</i> var <i>circuacea</i>	Common Correa	RUTACEAE
<i>Cullen australasicum</i>	Native Scurf-pea	FABACEAE
<i>Dodonaea hexandra</i>	Horned Hop-bush	SAPINDACEAE
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	Sticky Hop-bush	SAPINDACEAE
<i>Eremophila longifolia</i>	Berrigan	MYOPORACEAE
<i>Grevillea ilicifolia</i>	Holly Grevillea	PROTEACEAE
<i>Grevillea lavandulacea</i>	Lavender Grevillea	PROTEACEAE
<i>Goodenia ovata</i>	Hop Goodenia	GOODENIACEAE
<i>Hardenbergia violacea</i>	Native Lilac	FABACEAE
<i>Maireana aphylla</i>	Cotton Bush	AMARANTHACEAE
<i>Maireana oppositifolia</i>	Salt Bluebush	AMARANTHACEAE
<i>Myoporum insulare</i>	Common Boobialla	MYOPORACEAE
<i>Myoporum viscosum</i>	Sticky Boobialla	MYOPORACEAE
<i>Nitraria billardieri</i>	Nitre-bush	ZYGOPHYLLACEAE
<i>Olearia axillaris</i>	Coastal Daisy Bush	COMPOSITAE
<i>Olearia ramulosa</i>	Twiggy Daisy Bush	COMPOSITAE
<i>Pimelea glauca</i>	Smooth Riceflower	THYMELLAEACEAE
<i>Pimelea serpyllifolia</i>	Thyme Riceflower	THYMELLAEACEAE
<i>Rhagodia baccata</i>	Seaberry Saltbush	CHENOPODIACEAE
<i>Scaevola crassifolia</i>	Cushion Fanflower	GOODENIACEAE
<i>Thomasia petalocalyx</i>	Paper-flower	STERCULIACEAE
<i>Xanthorrhoea semiplana</i>	Grass-tree	XANTHORRHOEACEAE

Scientific Name	Common Name	Family
Trees		
<i>Acacia pycnantha</i>	Golden Wattle	MIMOSACEAE
<i>Allocasuarina verticillata</i>	Drooping Sheoak	CASUARINACEAE
<i>Banksia marginata</i>	Silver Banksia	PROTEACEAE
<i>Banksia integrifolia</i>	Coast Banksia	PROTEACEAE
<i>Callitris gracilis</i>	Southern Cypress-Pine	CUPRESSACEAE
<i>Eucalyptus leucoxylon</i>	South Australian Blue Gum	MYRTACEAE
<i>Eucalyptus porosa</i>	Mallee Box	MYRTACEAE
<i>Melaleuca halmaturorum</i>	Swamp Paperbark	MYRTACEAE
<i>Melaleuca lanceolata</i>	Dryaldn Tea-tree	MYRTACEAE
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	Native Apricot	PITTOSPORACEAE

References

- Costermans L. (2002) Native trees and shrubs of south-eastern Australia, New Holland Publishers Pty. Ltd., Australia.
- Holliday I. (2002) A field guide to Australian Trees, 3rd edition, New Holland Publishers Pty. Ltd., Australia.
- Kraehenbuehl D.N. (1996) Pre-European vegetation of Adelaide: a survey from the Gawler River to Hallett Cove, Nature Conservation Society of South Australia Inc., Adelaide.
- Mitchell M. (2002) Native Grasses: identification handbook for temperate Australia, Landlink Press, Victoria.
- Prescott A. (1988) It's blue with five petals: wildflowers of the Adelaide region, Lutheran Publishing House, South Australia.

Australian Natives

Scientific Name	Common Name
Grasses + Groundcovers	
Acacia cognata 'Limelight'	Limelight Wattle
Acacia pravissima	Little Nugget Wattle
Acacia myrtifolia	Myrtle Wattle
Acacia notabilis	Notable Wattle
Acmena 'Allyn Magic'	Acmena
Adenanthos sericea	Woollybush
Anigozanthus flavidus	Kangaroo Paw
Atriplex sp.	Saltbush
Banksia integrifolia 'Roller Coaster'	Banksia
Callistemon 'Captain Cook'	Bottlebrush
Callistemon 'Betka Beauty'	Bottlebrush
Callistemon 'Endevour'	Bottlebrush
Callistemon 'Harkness'	Gawler River Bottlebrush
Callistemon 'Little John'	Bottlebrush
Carex appressa	Carex
Carex bichenoviana	Notched Sedge
Correa alba	White Correa
Correa reflexa	Dusky Bells
Correa 'Firebird'	Correa Firebird
Correa 'Redex'	Correa Redex
Correa pulchella	Correa
Dianella caerulea 'Little Jess'	Dianella Little Jess
Dianella caerulea 'Breeze'	Dianella Breeze
Dianella caerulea 'Cassa Blue'	Dianella Cassa Blue
Dianella 'Silver Streak'	Dianella Silver Streak
Dianella revoluta 'Little Rev'	Dianella Little Rev
Dianella tasmanica 'Tas Red'	Dianella Tas Red
Dodonea viscosa purpurea	Purple Hop Bush
Einadia nutans	Climbing Saltbush
Eragrostis elongata 'Elvera'	Elvera Lavander Grass
Eremophila glabra	Eremophila
Eremophila kalbarri Carpet	Kalbarri Carpet
Escallonia macrantha 'Red Dwarf'	Red Dwarf
Eutaxia microphylla	Small Leaf Eutaxia
Grevillea 'Bronze Rambler'	Bronze Rambler
Grevillea 'Red Sunset'	Red Sunset
Grevillea obtusifolia	Spider Grevillea
Grevillea Sea Spray	Sea Spray

Australian Natives

Scientific Name	Common Name
Hardenbergia violacea	Native violet
Hakea rugosa	Pin Cushion Bush
Kennedia prostrata	Running Postman
Lawrenzia squamata	Salt Lawrenzia
Leucophyta brownii	Cushion bush
Lomandra contertifolia 'Wingarra'	Wingarra
Lomandra longifolia 'Katrinus'	Katrinus
Lomandra longifolia 'Tanika'	Tanika
Lomandra longifolia 'Nyalla'	Nyalla
Lomandra multiflora susp Dura	Hard Matrush
Myoporum parvifolium	Creeping Boobialla
Myoporum parvifolium (Fine Leaf)	Creeping Boobialla
Myoporum insulare	Boobialla
Poa labillardieri 'Eskdale'	Poa Eskdale
Poa poiformis 'Courtney'	Courtney
Poa poiformis 'Kingsdale'	Kingsdale
Pultenea largiflorens	Bush Pea
Rhagodia candolleana	saltbush
Rhagodia parabolica	Saltbush
Sarcocornia sp.	Beaded Samphire
Scaevola albida	White Fan flower
Scaevola 'Mauve Clusters'	Fan Flower
Sueda australis	Australian Sealite
Themeda australis 'Mingo'	Mingo
Thryptomene saxicola	Thryptomene
Thryptomene 'Super Nova'	Super Nova
Westringia 'Smokie'	Smokie
Westringia fruticosa	Jervis Gem
Westringia 'Zena'	Zena
Scientific Name	
Trees	
Angophora costata	Queensland box
Eucalyptus socialis	Red Mallee
Eucalyptus 'Summer Red'	Summer Red
Eucalyptus fasciculosa	Pink Gum
Jacaranda mimosifolia	Jacaranda

Exotic Species

Scientific Name	Common Name
Grasses + Groundcovers	
Abelia grandiflora	Glossy Abelia
Brachyscome multifida 'Compact'	Daisy
Coprosma 'Black Cloud'	Coprosma
Cerastium tomentosum	Snow in Summer
Choisya ternata	Mexican Orange Blossom
Cordyline australis	Cabbage Tree
Crowea exalata	Crowea
Eriostemon 'Flower Girl'	Eriostemon
Escallonia laevis	Escallonia
Felicia amelloides	Daisy
Hebe 'Blue Gem'	Hebe
Lavandula 'Coconut Ice'	Lavender
Leptospermum 'Wiri Donna'	Tea Tree
Liriope muscari	Liriope
Phormium tenax	New Zealand Flax
Pimelea 'Storm Cloud'	Fan flower
Pittosporum tenuifolium	Pittosporum
Trees	
Acer campestre 'Elsrijk'	Maple
Acer x freemanii 'Jeffersred' Autumn Blaze'	Maple
Acer sp.	Maple
Celtis occidentalis	Hackberry
Ginkgo biloba	Ginkgo
Gleditsia triacanthos sp.	Honey Locust
Prunus sp.	Ornamental Cherry
Pyrus calleryana (subsp)	Ornamental Pear
Lagerstroemia indica	Crepe Myrtle
Malus ioensis 'Plena'	Crab Apple
Melia azederach 'Caroline'	White Cedar
Pistacia chinensis	Pistachio
Prunus sp.	Flowering Cherry
Tilia cordata 'Baileyi' Shamrock	Tilia
Ulmus parvifolia 'Todd'	Chinese Elm
Zelkova serrata 'Green Vase'	Zelkova

Water Matrix

The following water decision matrix provides a guide for the use of water within the site. The matrix assesses key criteria and assigns a relevant score according to the most relevant response.

To use the matrix consider the most appropriate response to each of the given criteria and write the scores in the end column. Once all criteria have been answered, match the total score to the scoring range to determine the likely response.

		Score			
		0	1	2	
Criteria	Source	Recycled/Rain Water	Mixed Source (Cocktail)	Mains	
	Difficulty to Install	Easy	Moderate	Difficult	
	Capital Cost	Low	Medium	High	
	Efficiency	Dripline/Subsurface	Mixed	Aerial/ Pop-up	
	Operation	Automatic	Mixed	Manual	
	Maintenance	Low	Medium	High	

Score Range and Anticipated Result

Score Range	Result
0 - 4	Accept
5 - 7	Consider
8 - 12	Reject

Please note:

This matrix provides a guide only and all applications are assessed on an individual basis.

Landscape Checklist

- Name of Project**
- Location/Address of Site**
- Applicants Name and Contact Details**
- Submission Date**
- North point**
- Recognised Scale (1:100, 1:200, 1:500)**
- Details of all surfaces including hardscape and softscape**
- Plant lists, provenance, source, size, and density**
- Annotations and legend suitable to describe all works**
- Drainage and water management**
- Irrigation design and water source**
- Water Matrix Score (self assessed)**
- Grading and levels**
- Circulation, access and movement diagrams**
- Street furniture and play equipment**
- Signage and lighting**
- Environmentally Sustainable Development (ESD) components**
- Bird Hazard Assessment including food sources, habitat, roosting, and general attraction including construction and maintenance periods.**
- MOS 139 Compliance (<http://www.casa.gov.au/>)**

Glossary

AAL - Adelaide Airport Limited

CPTED - Crime Prevention Through Environmental Design

DTEI - Department of Transport Energy and Infrastructure

MOS 139 - Civil Aviation Safety Regulations 1998 Part 139 Manual of Standards

PAL - Parafield Airport Limited

RAAF - Royal Australian Air Force

TAFE - Technical and Further Education

TEC - Total Exchange Capacity

UniSA - University of South Australia

VOC - Volatile Organic Compound

Aerial Photography sourced from Google Earth.
(<http://earth.google.com/>)

Parafield Airport Limited

Building 18, Tigermoth Lane, Parafield Airport 5106

Phone (+61) 8 8308 9211 Fax (+61) 8 8308 9311

Email: airport@aal.com.au

