

**BUCKLAND PARK PROPOSAL**

**SOCIAL ANALYSIS**

**Prepared for  
WALKER CORPORATION  
& DAYCORP**

**March 2009**

**Disclaimer**

The opinions, estimates and information given herein or otherwise in relation hereto are made by Connor Holmes in their best judgement, in good faith and as far as possible based on data or sources which are believed to be reliable. With the exception of the party to whom this document is specifically addressed, Connor Holmes, its directors, employees and agents expressly disclaim any liability and responsibility to any person whether a reader of this document or not in respect of anything and of the consequences of anything done or omitted to be done by any such person in reliance whether wholly or partially upon the whole or any part of the contents of this document. All information contained within this document is confidential. Unauthorised reproduction of this document without consent may warrant legal action.

**Copyright ©**

Connor Holmes 2009. All rights reserved. No part of this work may be reproduced or copied in any form or by any means (graphic, electronic or mechanical, including photocopying, recording, recording taping, or information retrieval systems) without the prior written permission of Connor Holmes.

## CONTENTS

	Page No.
1. INTRODUCTION	1
2. URBAN DESIGN	4
2.1 The Master Plan	4
2.2 CPTED	4
2.3 Stage 1	5
3. HOUSING DIVERSITY	8
3.1 Densities	8
3.2 Affordable Housing	8
3.3 Stage 1	11
4. HUMAN SERVICES	12
4.1 Education and Children’s Services	12
4.2 Health Services	17
4.3 Emergency Services	19
4.4 Judicial Services	20
4.5 Recreation	20
4.6 Community Facilities	22
5. CONNECTIVITY	23
5.1 Transport Planning	23
5.2 Public Transport Services	24
5.3 Stage 1	26
6. COMMUNITY IDENTITY	27
6.1 Design Themes	27
6.2 Community Building	27
6.3 Welcome Package	29
6.4 Community Events	30
6.5 Community Facilities	30
6.6 Information for Residents	30
6.7 The Virginia Community	30
7. SUMMARY	31
8. REFERENCES	32
9. GLOSSARY	33

## 1. INTRODUCTION

All new and growing suburbs experience issues associated with supporting their communities before the provision of services becomes viable. Many new suburbs are small and disjointed, resulting in poor design and inefficient staging, hampering effective provision of social and physical connections to centres and services, parks and neighbours. The incremental arrival of new residents makes the provision of services, such as buses, unviable. Local and State Government services are inefficiently stretched to reach new residents in new areas, disconnected from each other and more established areas.

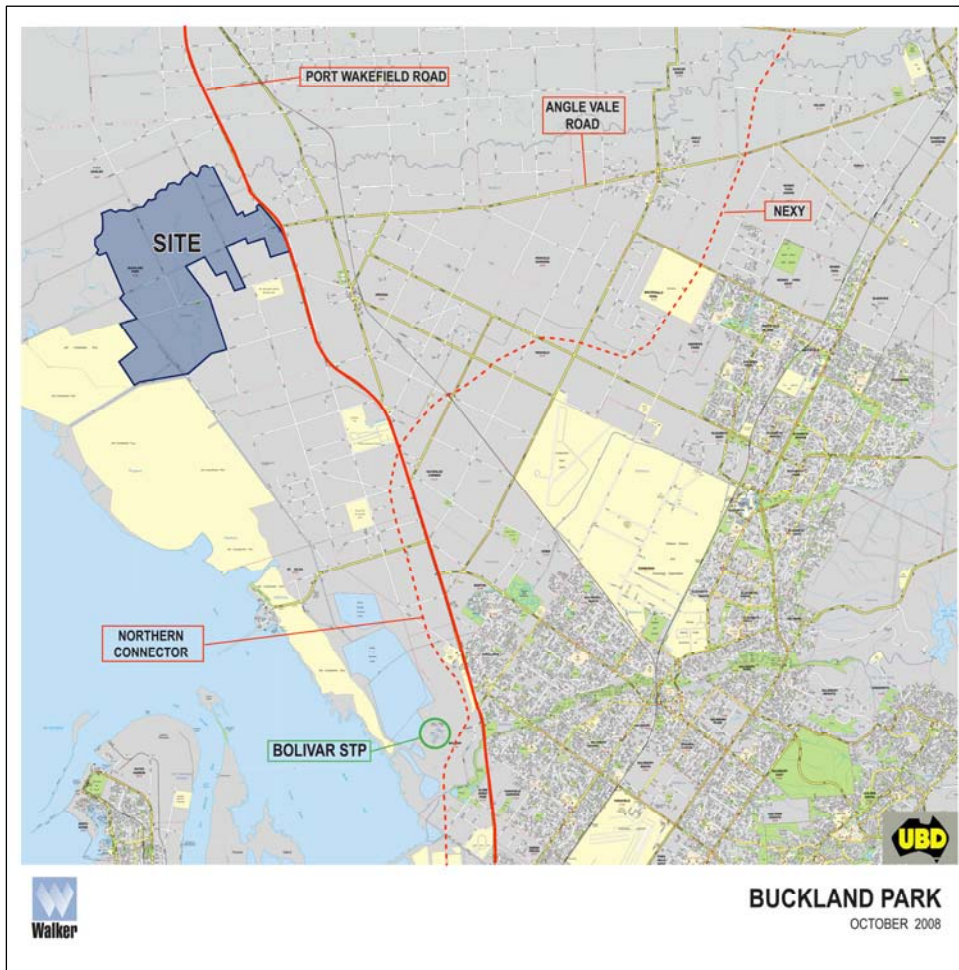
Buckland Park's strategic location, scale and single entity control facilitates an approach which can mitigate these usual experiences.

This report considers these potential social impacts associated with the Buckland Park proposal, and outlines the measures to mitigate these impacts and build a viable community.

The proposal is a joint venture of Walker Corporation and Daycorp.

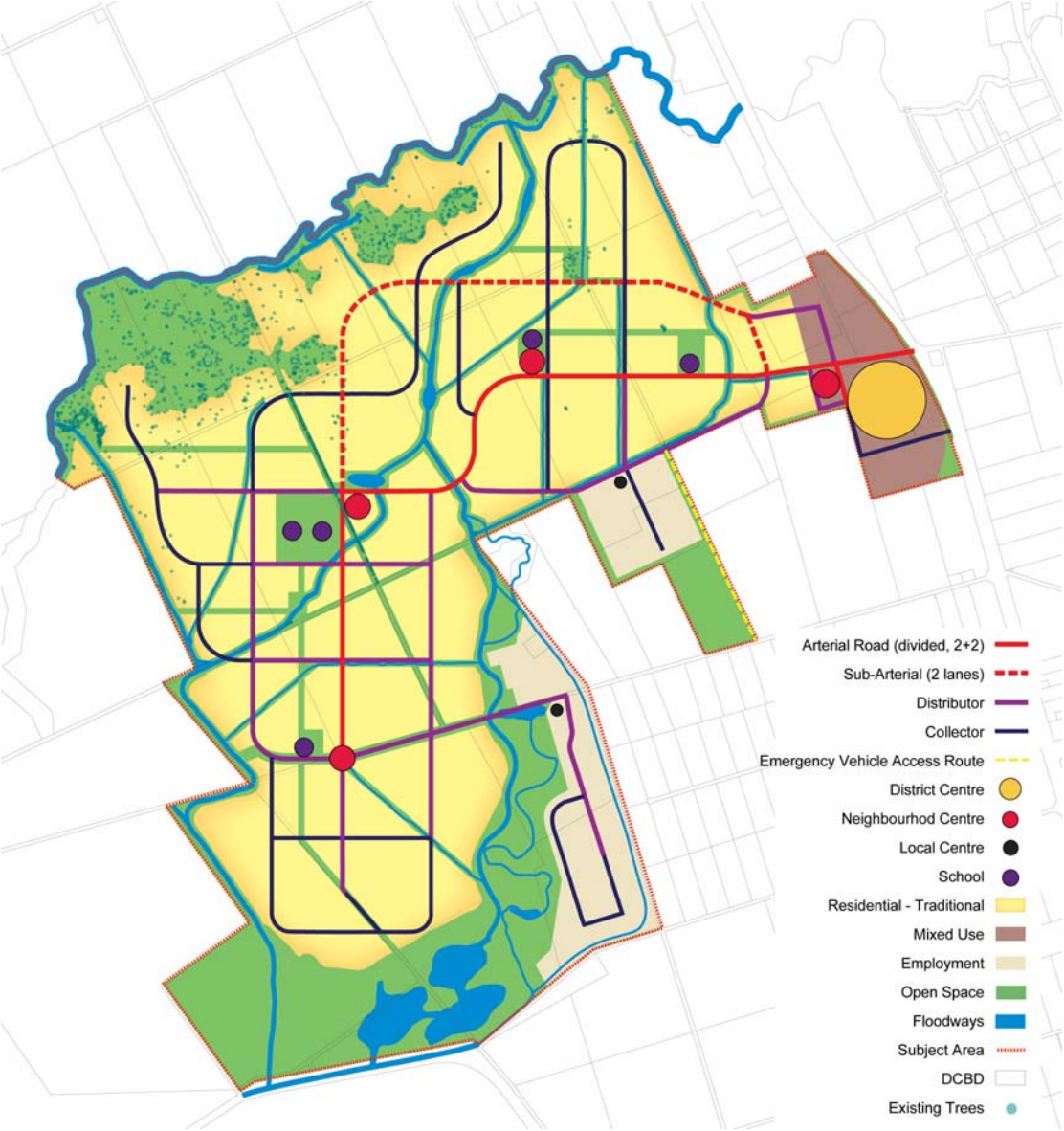
Buckland Park is located in Metropolitan Adelaide's north western region, on Port Wakefield Road within the City of Playford, west of Virginia. It is around 32 kilometres north of the Adelaide CBD and 14 kilometres west of Elizabeth, see Figure 1.1.

**Figure 1.1: Buckland Park Locality Map**



Buckland Park is expected to accommodate residential areas, supported by open space, recreation and biodiversity areas, employment precincts and centres.

**Figure 1.2: Buckland Park Master plan**

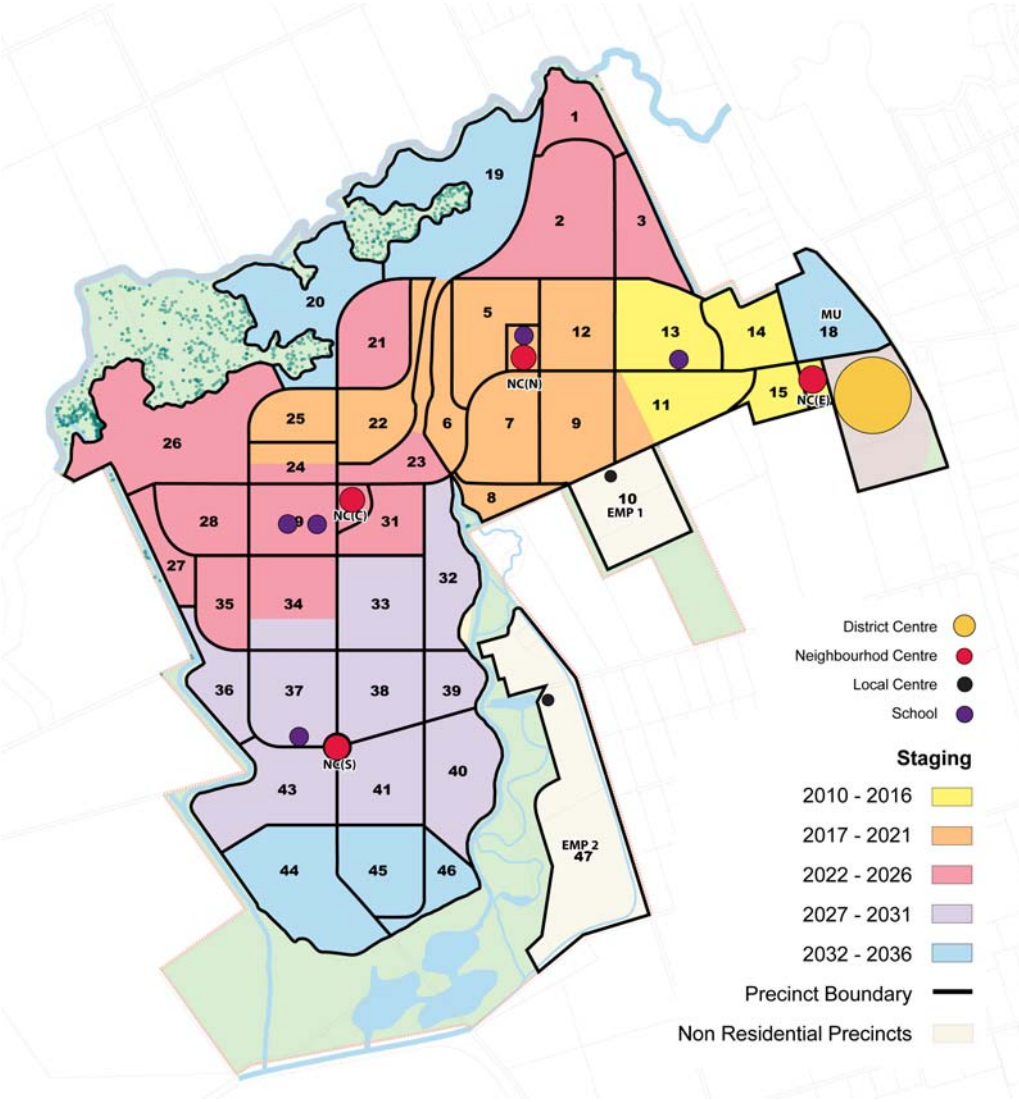


The proposal will be implemented in stages over a period of 25 years, Stage 1 is planned for 2010 to 2016, as illustrated in the staging plan below in Figure 1.3. The first residents are expected in 2013.

It is anticipated Buckland Park will be fully constructed and occupied by 2036, when it will accommodate 12,000 residential allotments, with an average size of 500m<sup>2</sup>, supported with multiple purpose open space, and commercial, retail, community and employment uses.

By 2036, a total population of 33,000 is anticipated, with a workforce of 10,687 people. (Connor Holmes, 2008).

**Figure 1.3: Proposal Staging**



This report addresses EIS preparation guidelines issued by the Development Assessment Commission in August 2008. In particular, the guidelines relating to overcoming social isolation and the provision of community facilities and services are addressed.

Strategies to promote social and physical connectivity within Buckland Park are explored in this report. The following are considered key elements to build a strong community at Buckland Park:

- Good urban design;
- Housing diversity;
- Accessible and appropriate human service provision;
- Effective physical connections between houses, parks, centres and employment;
- A sense of community identity.

This report provides an assessment of each of these elements.

## 2. URBAN DESIGN

Buckland Park's Masterplan is founded on New Urbanism principles. The design seeks to maximise pedestrian and bicycle access by locating centres and schools on open space links, and by the design of the street network.

Provision for employment activities and centres within the Masterplan is expected to result in a high level of employment self-sufficiency. It is anticipated 45% of Buckland Park's workers will hold jobs within Buckland Park (Connor Holmes, 2008).

People will be living and working the same area, potentially strengthening social networks. Less time will be spent commuting to work, making more time for family, social and community activities.

The relationship between residential precincts, centres, schools and parks and pedestrian, public transport and bicycles links will maximise opportunities for those spontaneous encounters which build social interaction.

Provision of schools which are accessible on foot, by bike or bus encourages children to walk or cycle to school.

### 2.1 The Master Plan

The Master plan incorporates the following elements.

- A balanced mix of uses needed to provide a complete community, including residential, retail, commercial, community, industry, education and recreation facilities;
- 3 Neighbourhood Centres, on proposed bus routes which will contain a range of facilities and services. These will be community focus points, accessible without a car;
- Location of schools proximate to centres to minimise number of trips needed to undertake multiple tasks, and maximise the efficiency of public transport network;
- A District Centre located to maximise public transport access, by allowing co-location of the Centre with a bus interchange, at the main entry for regional bus services, and the termination point for local bus services;
- Interconnected street networks designed to encourage walking and bicycling reducing the number and length of car trips;
- A broad range of housing types and price levels to attract a diversity of residents, including a component of Affordable Housing, which will contribute to Buckland Park's diversity, and will be located to ensure access to all facilities and seamless integration with Buckland Park's communities;
- Higher density residential areas located proximate to centres and public transport routes; and
- An open space network which will provide passive and active recreation opportunities, and include links to encourage walking and cycling.

### 2.2 CPTED

The creation of a safe urban environment is crucial to building a strong community at Buckland Park. Detailed design will incorporate Crime Prevention through Environmental Design (CPTED) principles. CPTED is premised on the idea that it is possible to prevent or reduce crime through the design of urban environments.

Crime Prevention Through Environmental Design (CPTED) principles seek to reduce the opportunities for crime in urban environments by increasing the efforts and risks for offenders. Put simply, CPTED is about designing and building safer places.

CPTED principles can be summarised as:

- surveillance – providing opportunities for “eyes on the street” (or public place) so that activity in public places is naturally noticed by users of adjacent buildings and places;
- legibility – designing environments, which allow people to know where they are and how to get where they are going, avoiding the risk of confusion or entrapment;
- territoriality – being clear about the line between public places and private places, avoiding the risk of people trespassing by accident or inadvertently finding themselves in somebody else’s private space;
- ownership – active urban places which are used by, and significant to, their community will be safer than those which are not “owned” by the public;
- management – well-maintained places are more likely to encourage legitimate use and community “ownership” than those which are broken-down, dirty or vandalised; and
- vulnerability – urban spaces which are open, accessible, visible, active and (after dark) well-lit will be safer than those which create hidden spaces from which there is only one route of escape.

CPTED principles have been applied during preparation of the Master plan and will be used to inform and guide the detailed design of each stage.

In particular, the Master plan reflects CPTED principles by:

- featuring a regular and orthogonal street layout, promoting legibility and permeability through direct lines of sight and movement for pedestrians and by providing choices for movement between destinations;
- incorporating open spaces capable of hosting a range of activities (for example, walking, cycling, passive recreation, water features), promoting opportunities for passive surveillance and maximising potential activity levels;
- embracing a landscaping concept that will minimise the risk of vulnerability by avoiding unnecessary blocking of sight lines or lighting footprints; and
- incorporating neighbourhood and local centres which will promote activity and interest in each precinct.

### 2.3 Stage 1

Stage 1, to be constructed and occupied 2010 and 2016, will comprise the following:

- 616 residential lots;
- Neighbourhood Centre, which will be commissioned in two phases. The first phase will be commissioned with occupation of first houses, the second phase as demand grows;
- B7 School site. At this time it is anticipated this school will be private, but it will be available as a public school;
- Sports oval, which is proposed to be a shared facility between school and community;
- Landscape including various elements designed to:
  - Create a unique character;

- provide visual amenity;
  - manage stormwater;
  - provide recreation opportunities; and
  - provide pedestrian and bike links.
- Community space and a community worker, within the neighbourhood centre;
  - Community bus service;
  - Bicycle and pedestrian links between houses, bus stops, the Neighbourhood Centre and School, along roads and linear parks.

**Figure 2.3: Stage 1 layout**



The Stage 1 Indicative Allotment Layout Plan reflects CPTED principles as it:

- encourages passive surveillance of public spaces and pedestrian routes. The two internal reserves, the school and the neighbourhood centre face public roads, rather than being bounded by back fences, and the linear open space corridor is open to public roads on both sides, or at least one side for more than 75% of its length;
- features orthogonal road alignments, allowing good lines of sight into and out of individual streets;
- provides good permeability and choice of access for pedestrians, in particular by avoiding dead-end culs-de-sac or narrow pedestrian-only walkways, and ensuring connectivity of pedestrian routes; and
- promotes clarity between public and private spaces by minimising the number of allotments which abut a road and a reserve on opposing boundaries.

The detailed design of the neighbourhood centre will embody CPTED principles including in the disposition and orientation of activities and public spaces and pedestrian circulation routes, the nature and design of lighting, provision of effective directional signage, location and orientation of building entrances, provision of a “heart” for the local community, and by ensuring landscaping does not obscure sightlines or lighting footprints.

### 3. HOUSING DIVERSITY

#### 3.1 Densities

A community comprising a range of household types and incomes, families at different life cycles and people of different ages is balanced and interesting, and people are able to support each other. For example, grandparents who live nearby can support their children with young families.

This type of community is difficult to achieve in a new and growing suburb, where residents all arrive in a short period of time, are at similar family stages and have similar incomes. However, this also has its advantages. For example, a community dominated by young families who have a lot in common, will create a social life made up of shared activities and interests. This type of community can grow together.

At Buckland Park it is anticipated there will be a large number of young families in the initial days of each stage, but this will change as each community ages. (Connor Holmes, 2008)

Diversity will be achieved over time as new stages are constructed and occupied by young families, complementing the older families in previous stages.

To facilitate diversity within the Master plan, and over time, a mix of allotment and dwelling types to cater for a range of life stages and household incomes is proposed. This is reflected in the mix of residential densities provided in table 3.1.

**Table 3.1: Buckland Park Residential Densities**

Location	Net Residential Area	Net Residential Density	Total Dwellings
Low Density Residential	77ha	10	700
Traditional Density Residential	449ha	20	8,580
Medium Density	61ha	40	2,320
Mixed Use Precinct	13ha	40	400
Total Dwelling Yield	600ha	22	12,000

Detailed planning will be undertaken prior to each stage's land division plan being approved.

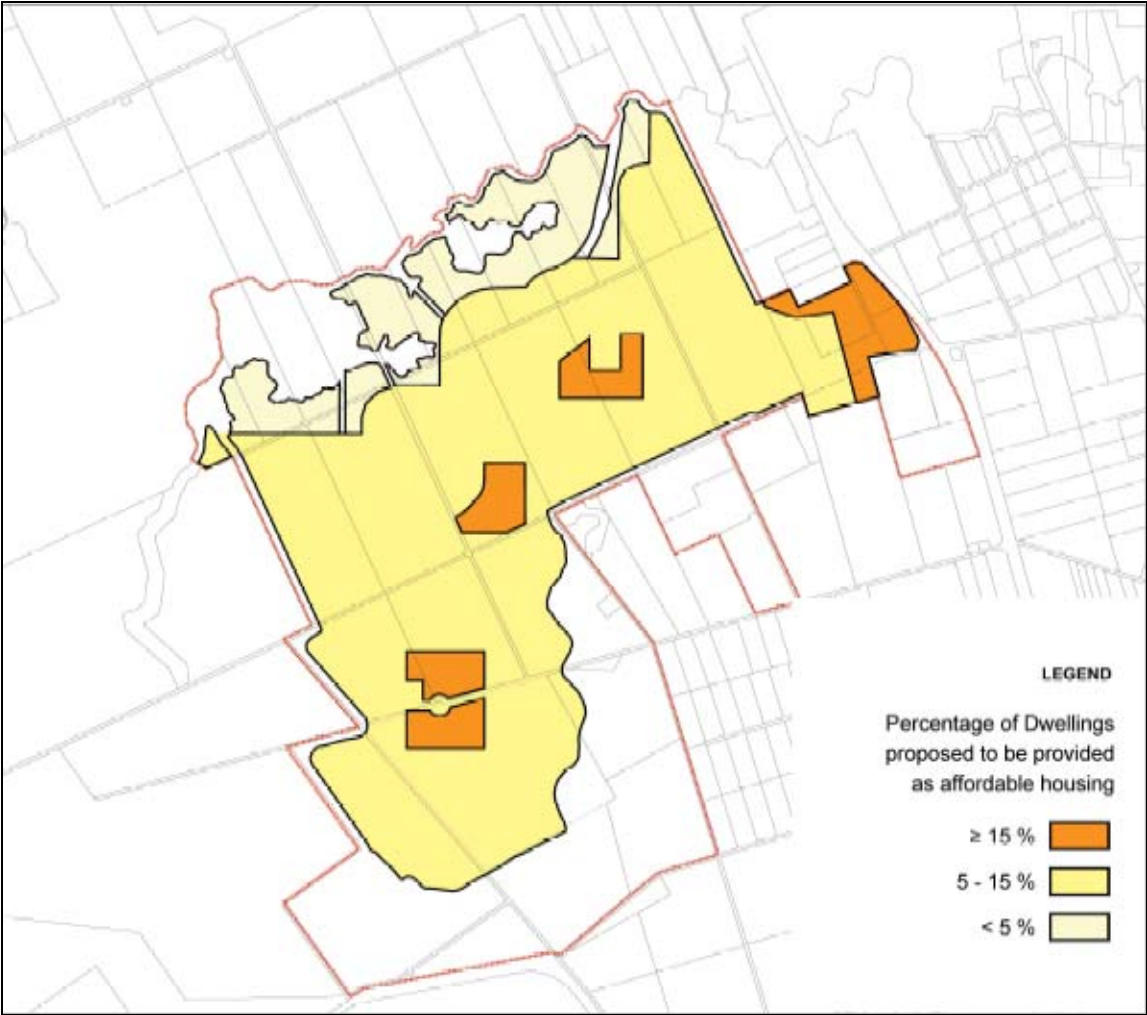
It is therefore essential any future planning controls applying to Buckland Park allow a flexible approach to the densities within future stages.

#### 3.2 Affordable Housing

It is intended Buckland Park will deliver 15% affordable housing, spread over the Masterplan, and provided over the 25 year construction and occupation period. With an expected yield of 12,000 dwellings, there will be 1,800 affordable dwellings (Connor Holmes, 2008c).

Figure 3.1 below shows the distribution of affordable housing throughout the Master plan.

**Figure 3.1: Affordable Housing Distribution**

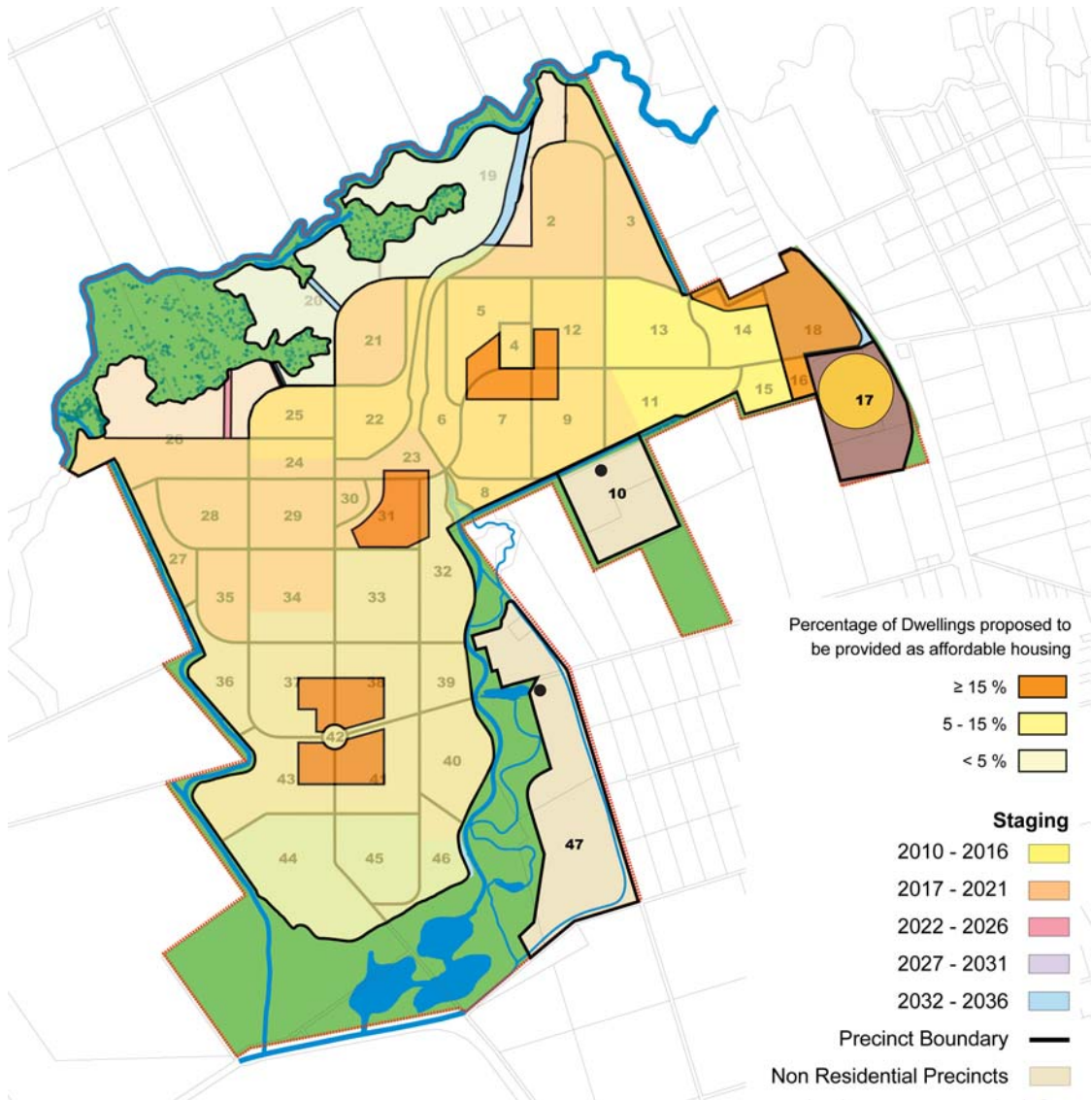


There are three concentrations of affordable housing throughout Buckland Park:

- > 15%: areas where a wide range of housing types, including medium density housing and apartments could be supported when Buckland Park becomes more established, particularly around centres and close to public transport routes;
- 5% - 15%: areas comprising predominately lower density, detached housing, which will be progressively created across the Masterplan, and over time to 2036;
- < 5%: areas adjacent to the woodlands where allotments will be larger, to take advantage of landscape amenity and to accommodate requirements for tree retention. As these larger allotments will be necessarily more expensive it will be difficult to provide affordable homes. These areas are within Buckland Park’s later stages.

Figure 3.2 shows the distribution of affordable housing over Buckland Park’s stages.

**Figure 3.2: Distribution of affordable housing over time**



As a deliberate consequence of this approach, it is expected the delivery of affordable housing will be below 15% in the earlier stages, and will gradually increase as Neighbourhood Centres, the District Centre and in the Mixed Use precinct become established.

Affordable Housing provision will be greater in the middle years, when Buckland Park's community support services and facilities are more established.

Up to 5% of the Affordable Housing allotments could be purchased by the Affordable Housing Trust for public housing supply at any stage, although it is likely this would not be an option until the community is more established, including community services. These sites would be available at current market value.

### 3.3 Stage 1

Stage 1's residential mix is described in Table 3.1

**Table 3.2: Stage 1 Residential Yield**

Allotment Type	Allotment Size	Number
Premium	500m <sup>2</sup> +	288
Courtyard	450m <sup>2</sup> -500m <sup>2</sup>	175
Large Villa	375m <sup>2</sup> -450m <sup>2</sup>	91
Small Villa	300m <sup>2</sup> -375m <sup>2</sup>	32
Gatehouse	150m <sup>2</sup> -175m <sup>2</sup>	30
<b>TOTAL</b>		<b>616</b>

Stage 1's Affordable Housing component is 10%. It is considered at such an early point in the construction and occupation programme, families with financial resources to support larger mortgages or private rental are less likely to require the community support services that will be difficult to provide. Families requiring an affordable home may require more of these services. Therefore only 10% affordable housing is proposed, rather than the 15% required (Connor Holmes, 2008c).

As described above, later stages will incorporate more than 15% affordable housing to ensure Buckland Park's compliance with requirements.

## 4. HUMAN SERVICES

Significant urban expansion is occurring or planned within metropolitan Adelaide's north and north west region. Current major proposals being planned and constructed include Blakeview and Playford Alive. Playford Alive is a joint initiative between the Land Management Corporation (LMC) and City of Playford, which will deliver around 9,000 dwellings, potentially accommodating an additional 24,000 residents.

Playford Alive includes regeneration within the Peachey Belt (Davoren Park, Smithfield and Smithfield Plains) and greenfield residential areas at Andrews Farm, Penfield and Munno Para West.

A new residential area is being constructed at Blakeview on LMC land, which is expected to deliver around 4,700 dwellings and accommodate an additional 12,700 residents.

The Department of Planning and Local Government (DPALG) is currently preparing a 30 Year Plan for Greater Adelaide, which replace its Planning Strategy for Metropolitan Adelaide 2007 and Planning Strategy for the Outer Metropolitan Adelaide Region 2007. (Minister for Planning, 2008)

The 30 Year Plan is expected to be released in 2009, and will guide Adelaide's growth and consolidation.

The Metropolitan Adelaide's northern region has experienced significant growth in recent years and it is expected it will remain a focus for metropolitan growth in the new 30 Year Plan.

Importantly, many social services are provided by the state government. An increased demand for these services is a function of Adelaide's general population growth, and is not a direct consequence of the Buckland Park proposal. In other words, these services would be required, no matter where in Metropolitan Adelaide the new houses are built. The South Australian government is projecting a demand for 258,000 new houses to accommodate 560,000 more people in Greater Adelaide Region over the next 30 years (Department of Planning and Local Government 2008)

Buckland Park's ultimate population of 33,000 people can support a range of health, education, recreation and community services.

However, service planning must be placed in the context of planning for the entire region to avoid duplication and ensure efficient use and maintenance. To assist government in this task, this report provides information on the requirements for human services generated by Buckland Park, and estimates the timing for the provision of those services.

Over the 25 year construction and occupation period, government agencies will be able to periodically review human service requirements at Buckland Park and the region, taking into account changes to stages, the rate of progress and demographic changes.

### 4.1 Education and Children's Services

This section estimates the demand for education services within Buckland Park, and methods for providing those services. The Department of Education and Children's Services (DECS) has advised the approach taken to Government education provision within Buckland Park described below is appropriate based on the demographic projections, but will be reviewed by DECS during the 25 year construction and occupation period (meeting with DECS, September 16 2008).

It has been assumed the majority of Buckland Park’s students will attend education facilities within Buckland Park. This has positive implications in terms of reducing the need for car travel, and increasing opportunities for local children and parents to build community relationships.

#### 4.1.1 School Education

The following key assumptions were applied by Connor Holmes (2008), when determining the number and type of schools required at Buckland Park:

- 100% school education self sufficiency;
- 67% primary school students attending government schools; and
- 60% of secondary school students attending government schools.

100% self sufficiency means there will be capacity within schools to cater for all of the projected school age resident children. This does not, however, necessarily translate to 100% self containment. Indeed, it is likely some students living at Buckland Park will attend schools elsewhere and, equally, it is likely Buckland Park’s new education facilities will attract students living elsewhere. The attendance rate of government schools (65% overall) has been advised by DECS and is based on the State average.

Connor Holmes (2008) concluded Buckland Park will support the provision of:

- Four to five primary schools, two to three government and two non-government;
- Two secondary schools, one government and one non-government.

In line with the DECS Education Works Program, it may be expected that one government primary school, and the government secondary school will be combined to create a B-12 super school. The configuration of the government schools will, however, be determined by DECS.

Tables 4.1 and 4.2 provide the number of Buckland Park primary and secondary school enrolments at various stages of occupation, and the number and type of schools needed to accommodate those enrolments.

**Table 4.1: Primary School Enrolments and Schools**

Year	All Schools		Government		Non Government	
	Students	Schools	Students	Schools	Students	Schools
2016	320	-	214	-	106	-
2021	1,336	2	895	1	441	1
2026	2,449	3	1,641	2	808	1
2031	3,395	4/5	2,275	2	1,120	2
2036	3,762	4/5	2,521	2	1,241	2

Source: Connor Holmes 2008

**Table 4.2: Secondary School Enrolments and Schools**

School Type	All Schools		Government		Non Government	
	Students	Schools	Students	Schools	Students	Schools
2016	167	-	100	-	67	-
2021	720	-	432	-	288	-
2026	1,418	2	851	1	567	1
2031	1,874	2	1,124	1	750	1
2036	2,046	2	1,228	1	818	1

Source: Connor Holmes 2008

The location of these schools is shown on the Buckland Park Master plan (Figure 1.2). The proposed distribution of schools will provide the following benefits:

- Provision for a Primary School within Stage 1, it is anticipated core facilities will be provided initially, with the school growing as the number of school age residents grows;
- Location of schools near Neighbourhood Centres to reduce the number of trips and provide opportunities for shared facilities, such as ovals and halls;
- Location of schools on public transport routes; and
- Co-location of non government secondary school and government B-12 school adjacent to Neighbourhood Centre (Central) to maximise accessibility throughout Buckland Park and opportunities for shared facilities, such as an indoor recreation centre of library facilities.

#### 4.1.2 Pre-school Education

The projected demand for pre-school education places has been determined using Australian Bureau of Statistics (ABS) data relating to pre-school enrolment rates for 3-5 year olds, average hours of attendance and the projected age profile for Buckland Park. (Connor Holmes 2008)

These figures have been applied to Buckland Park population projections to establish requirements for pre-school places.

24% of 3 year olds, 56% of 4 year olds and 34% of 5 year olds will attend pre-school 2.5 days per week. It is expected most children will attend pre-school close to home and, therefore, 100% of pre-school places should be provided within Buckland Park.

Connor Holmes (2008), expects four pre-schools will be required and will be co-located with primary schools.

It is reasonable to expect two pre-schools will be privately operated, and two government operated as they will co-located with two private and two government primary schools.

As shown in Table 4.3, it is expected Buckland Park's first pre-school will open at the same time as the first primary school, around 2017/2018. It will be located within Stage 1.

By 2036, total pre-school enrolments are expected to be approximately 538 children, equivalent to 269 full-time pre-school places.

**Table 4.3: Pre School Placements**

Year	Estimated Number in Pre-School	FTE Number of Places	Places within Buckland Park
2016	48	24	-
2021	202	101	101
2026	372	186	186
2031	495	248	248
2036	538	269	269

Source: Connor Holmes 2008

### 4.1.3 Childcare

The projected demand for child care places within Buckland Park has been determined using ABS data relating to child care types and attendance rates for 0-5 year olds, and the projected age profile for Buckland Park (Connor Holmes 2008).

Beyond five years of age, the principal formal child care used is before and after school care which has not been considered in these estimates, as it is assumed these places will be provided by primary schools.

The following child care type and usage rates underpin childcare projections (ABS Catalogue No. 4402.0).

Occasional Child Care	10%	1 day per week
Long Day Care	70%	2.5 days per week
Family Day Care	20%	2 days per week

As for pre-schools, it is expected child care facilities will be located within or proximate to primary schools within Buckland Park but are likely to be privately operated. A lower self-sufficiency rate is projected for child care places compared with other education services as it is recognised a substantial number of Buckland Park residents will work or attend tertiary education outside of Buckland Park and may prefer a childcare establishment closer to their place of work or education. Accordingly, it has been assumed only 75% of the required child care places will be provided within Buckland Park.

Table 4.4 below provides total and full time equivalent child care projections as well as the number of places projected to be provided within Buckland Park. The opening of the first child care centre within Buckland Park is expected to occur around 2017/2018, coinciding with the opening of the first primary school and pre-school.

**Table 4.4: Child Care and Pre School Placements**

Facility	Estimated Number in Child Care	FTE Number of Places	Places within Buckland Park
2016	78	35	-
2021	328	148	111
2026	604	272	204
2031	794	357	268
2036	847	381	286

Source: Connor Holmes

#### 4.1.4 Stage 1

Land has been set aside for a B7 school within Stage 1. It is anticipated this school will be private, however, it could be a public school. It is expected a pre-school will be associated with the school, and before and after school care provided.

This school is not expected until late in Stage 1's construction and occupation time frame.

Education and child care facilities will be needed for the first residents, which it is anticipated will begin arriving in 2013 (Connor Holmes 2008).

Virginia Primary School is 5 kilometres from Stage 1 by road. It has an area of approximately 5 hectares, and buildings with a capacity for 300 students, 270 students were enrolled in 2007 (Personal Communication with DECS, 2008).

Primary schools require a minimum area of 4 hectares (meeting with DECS, 20 November 2007).

There is room at Virginia Primary School for demountable buildings to accommodate Buckland Park's first primary school aged residents. DECS requires 6 months to procure a demountable building (meeting with DECS, 20 November 2007).

There are several private and public high schools in the region.

- Trinity College campuses at Angle Vale, and Evanston South;
- St Brigid's School at Evanston;
- St Columbia College at Andrews Farm;
- Xavier College at Gawler Belt;
- Gawler High school at Evanston.

Students from Virginia currently attend Gawler High school. Its buildings have capacity for 1,000 students, and in 2007, 800 students were enrolled (Personal Communication with DECS, 2008).

Only 100 public high school students are expected in Stage 1 by 2016.

While it is unknown what places will be available when high school children begin to live at Buckland Park, there will not be significant numbers until 2026, providing DECS with the time to plan for facilities. Also, it is expected a large number of high school students will attend private schools (Connor Holmes 2008).

Stage 1 includes land which could be used for a childcare centre adjacent to the neighbourhood centre. Many new child care centres are provided by the private sector, this land would be an appropriate location for a private centre.

Stepping Stone(SA) Childcare and Early Development Centres Pty Ltd Childcare opened a new centre for children 6 weeks to 5 years at Two Wells in October 2007. Two Wells is 6.7 kilometres north of Buckland Park.

In mid 2008, this centre had capacity for an additional 60 children (Personal Communication with DECS, 2008).

Other child care centres in the region have experienced rapid growth in enrolments, suggesting a latent demand.

It cannot be predicted how many childcare places will be available in 2013, however, with new residents and potentially latent demand already existing in the area the provision of a new centre in the first or second year may be viable.

It is also anticipated new residents will, in the interim be able to continue with child care arrangements in place prior to moving to Buckland Park, particularly if their centres are close to their workplaces.

## 4.2 Health Services

### 4.2.1 Hospital/Emergency Health Services

A population of 33,000 does not of itself support the construction of a public hospital at Buckland Park. It is anticipated Buckland Park residents will access the following hospital services:

- Lyell McEwen Hospital, Elizabeth (22km);
- Gawler Hospital, Gawler (24km);
- Queen Elizabeth Hospital, Woodville (30km);
- Royal Adelaide Hospital, Adelaide (30km).

The provision of additional, or extended, major public hospital facilities is a matter government will consider in the context of growth in Metropolitan Adelaide's north and north west region.

A GP Plus Health Care Centre will be established at Elizabeth. In addition to a general practice service, this centre will provide the following:

- Chronic disease self management programs;
- After hours GP services;
- Physiotherapy;
- Nursing and Midwifery services;
- Health education;
- Specialist Clinics;
- Minor medical procedures;
- Allied health – podiatry, dental, physiotherapy, occupational therapy;
- Children and Youth health;
- Drug and alcohol services;
- Community mental health;
- Counselling;
- Aboriginal health.

The centre will offer an extended hour service as an alternative to visiting a hospital, providing Buckland Park residents with acceptable access to medical hospital services.

#### **4.2.2 General Practice**

The provision of public general practice services at Buckland Park is considered unlikely given DH's Health Care Plan promotes the consolidation of existing services and establishment of ten GP Plus Health Care Centres across the metropolitan area.

The Elizabeth GP Plus Health Care centre described above will be a larger centre and DH advise another smaller GP Plus Centre is likely to be established within the City of Playford. These centres will serve the population of Buckland Park but will not be located within the site. The availability of public transport will, therefore, be crucial in ensuring these services are accessible to the Buckland Park population.

Provision has been made within the Buckland Park Master Plan for private medical services in the Neighbourhood and District Centres. If required, the District Centre can accommodate a GP Plus Health Care Centre.

#### **4.2.3 Specialist Medical Services**

As discussed above, the provision of public specialist medical services within Buckland Park is unlikely but a range of specialist services will be provided in the GP Plus Centres and hospitals.

Provision will be made for private specialist services, as for general practice services, to locate within the Buckland Park Neighbourhood and District Centres according to market demand. These services may include:

- Chiropractic
- Physiotherapy
- Podiatry
- Psychology
- Dental/Orthodontics
- Gynaecology/Obstetrics
- Paediatrics
- Cardiology
- Acupuncture
- Naturopathy

#### **4.2.4 Aged Care**

Buckland Park can accommodate both a retirement village and residential aged care facility at a location and time determined by demographic growth, availability of services and market demand. The location of these facilities is yet to be determined. Based on the projected age profile at 2036, demand for aged care beds is expected to be in the order of 150-200 beds. (Connor Holmes 2008)

#### **4.2.5 Local Services**

Playford City Council currently provides health services to its community, including baby immunisation clinics, youth services and services for people with disabilities.

The demand for these services will progressively grow with Buckland Park.

#### 4.2.6 Stage 1

There will be 6 specialty shop spaces within the first phase of Stage 1's neighbourhood centre. It is anticipated a doctor's and/or dentist's surgery will be accommodated in one or two of these spaces, early in Stage 1's occupation phase.

#### 4.3 Emergency Services

Buckland Park is located within South Australia Police's (SAPOL) Elizabeth Local Service Area (LSA). The Elizabeth LSA covers approximately 1,767 square kilometres and serves a population of around 223,606.

Police LSA boundaries will be adjusted in June 2009 as part of an initiative to introduce uniform boundaries across Government agencies (Planning SA, 2008).

Under these changes, Buckland Park will remain within the Elizabeth LSA.

SAPOL have advised the provision of a Police Station within Buckland Park will be dependant on population growth, both on the site and within the region.

Buckland Park may be considered a suitable location to serve the surrounding community, although another location may be found (Personal Communication with SAPOL, 2008).

The Police Station at Two Wells requires upgrading and Buckland Park may be a suitable alternative location for this Station. It will ultimately have a population of 33,000 people, which will support a new Station, and will have potential Station sites in the District Centre which will be more accessible to the region than Two Wells (Personal Communication with SAPOL, 2008).

If SAPOL decides to provide a Police Station at Buckland Park, there are a number of location requirements. Accessibility and visibility are key considerations.

The District Centre will be located on Port Wakefield Road and incorporate district level traffic, shopping, commercial and community facilities.

The District Centre will also be the focus of regional bus services which will link the Centre with the Elizabeth, Smithfield and Munno Para Transport Interchanges.

The District Centre's high visibility and good accessibility make it a suitable location for a future Buckland Park Police Station if required (Personal Communication with SAPOL, 2008).

It would be a shop-front Station operating 9am-5pm Monday to Friday, similar to one recently established at Blakeview.

Floor space requirements for this type of Station are approximately 100 square metres and would have to meet specific Police security requirements including construction materials, front and rear access and video surveillance (Personal Communication with SAPOL, 2008).

This type of facility could be accommodated in the District Centre.

The closest Ambulance Station and Fire Station to Buckland Park are at Elizabeth.

Whether additional stations are required within Buckland Park will require further investigation and consideration in the context of regional growth.

There is, however, room for these services within the District Centre, in locations with suitable road access.

#### 4.4 Judicial Services

It is unlikely a community corrections centre will be required at Buckland Park. There are six community corrections centres across the metropolitan area. The Holden Hill Community Corrections Centre is the Northern Metropolitan Adelaide Regional Office and an additional Centre is located at Elizabeth.

Magistrates Courts are located proximate to the Holden Hill and Elizabeth Community Corrections Centres and major Police Stations.

It is therefore considered unlikely a Court House will be located at Buckland Park. However, there will be land to accommodate judicial facilities, should the South Australian government see the need to do so in the coming decades.

#### 4.5 Recreation

The Master plan provides for a range of active and passive recreation facilities.

Table 4.5 contains national participation rates for various sporting activities. This information has informed the proposed provision of recreation areas/open space within Buckland Park.

**Table 4.5: Sports Participation Rates**

Activity	5-14 Years		15 Years and Over	
	Rate	Participants	Rate	Participants
Athletics / track and field	2.9	201	0.3	74
Australian rules football	7.5	520	1.7	438
Baseball	0.7	49	0.2	52
Cricket (outdoor)	5.4	374	2.1	546
Golf	0.9	62	5.5	1,426
Hockey (outdoor)	1.9	132	0.5	131
Horse riding / equestrian activities	1.5	104	0.8	207
Lawn bowls	n/a	n/a	1.6	417
Netball	8.5	589	2.7	702
Rugby league	4.2	291	0.6	149
Rugby union	2.1	146	0.5	128
Shooting sports	n/a	n/a	0.4	95
Soccer (outdoor)	13.2	915	2.6	683
Softball	1.0	69	0.2	55
Tennis	7.3	506	4.8	1,252
Touch football	1.7	118	1.6	415

Source: ABS Catalogue No. 4901.0; 4177.0

From Table 4.5 it is evident there will be a strong demand for open space which can accommodate facilities related to football, cricket, netball, soccer and tennis. Of these sports, football and cricket and potentially netball and tennis can utilise the same venue, although the later may be difficult considering the high participation rates in both age cohorts. In addition, the participation rates for tennis courts are high due to the length of the game and potential use on weekdays.

The participation rates given in Table 4.5 are national averages and some variations are expected within Buckland Park. Specifically, participation in rugby is expected to be lower and participation in Australian Rules football correspondingly higher.

The total number of sporting facilities required by Buckland Park’s residents has been estimated based on the potential number of participants for the main sporting codes established above.

The potential number of required playing areas is based on current estimates of the total number of games played (both juniors - morning and seniors - afternoon) at any given venue during a Saturday or Sunday.

**Table 4.6: Ratios of Participants to Sporting Facilities**

<b>Sport</b>	<b>Ratio of Participants to Sporting Facilities</b>
Australian Rules Football	160 players per 1 oval per day
Cricket	44 players per 1 oval per day
Netball	84 players per 1 netball court per day
Soccer	150 per 1 soccer pitch per day
Tennis	1 court per 1000 people

In addition, a home and away rotation of games played at each venue has been included in calculations, as this allows a greater number of teams/divisions to be based at each facility.

There are many sporting clubs and facilities already established in the Playford LGA, which are underutilised. Buckland Park’s residents are likely to join existing clubs and use facilities outside of the site, and some Playford residents will use Buckland Park’s facilities.

Projected need for key sporting infrastructure within Buckland Park is as follows:

- Australian Rules Football/Cricket– 8 ovals;
- Netball – 15 courts;
- Soccer – 8 pitches;
- Tennis- 33 courts.

In addition to outdoor sporting and recreation facilities, the provision of an indoor recreation centre can be supported at Buckland Park. An appropriate location for this facility is within or adjacent to the central Neighbourhood Centre and its adjoining schools.

The recreation centre should be available for use by schools as well as the general public. Most school use can be expected to take place during school hours, whereas public use of this facility is more likely to be out of working hours. It is projected approximately 3,500 students will attend the two schools adjacent to the central Neighbourhood Centre, suggesting the facility would be well used during school hours (Connor Holmes 2008).

This location is central to all Buckland Park’s residents, and is on a proposed bus route. The Master plan provides area for an indoor recreation centre. However, the design, format and scale of this recreation facility will be considered in during the design of this stage, which is estimated for construction and operation in 2022 to 2026.

All outdoor sporting and recreation infrastructure should be considered for shared use by schools and the general public, delivering benefits such as:

- Enhancing safety – avoiding underutilised recreation areas which can attract vandalism and other criminal activity;
- Enhancing cost-efficiency – the ongoing maintenance of recreation areas and sporting facilities between the City of Playford and schools; and

- Promoting an active community.

Collaboration between the proponent, the City of Playford, DECS and private school and recreation facility providers will be required to realise these opportunities.

Playford Council has recognised the need for passive and informal recreation facilities within the LGA (Playford Council). These include playgrounds, bushland walking trails, picnic areas, and in particular, informal facilities for teenagers, like skate parks and BMX tracks.

A Council maintenance depot may be required within the site. This can be accommodated within the Master Plan's open space areas.

The Buckland Park Master Plan provides adequate opportunity for these types of activities. There will be biodiversity areas, albeit restricted to a certain extent for protection of their values, the Gawler River corridor, and areas in the southern part of the site.

Detailed landscape and land division design of future stages will incorporate these facilities.

#### 4.6 Community Facilities

##### 4.6.1 Libraries

There are currently two libraries serving Playford City's population of 78,000 people (Personal Communication with Playford City Council 2009). Applying this rate of provision to the proposal's projected population of 33,000 people, one library will be warranted to serve residents when it is fully constructed and occupied in 2036.

It is conceivable library formats may change during the proposal's 25-year construction and implementation time frame. For example, the use of electronic information systems may grow, reducing requirements for physical space to house books. Or, community library facilities may be shared with school library facilities.

Nominating a library location and configuration at this time would restrict the Council's ability to consider alternate methods for providing library facilities in the future.

There is adequate land within the Masterplan's centres to accommodate a library if and when it is required.

##### 4.6.2 Community Centres

Two community centres may be required to serve Buckland Park's residents when it is fully constructed and occupied in 2036 (Personal Communication with Playford City Council 2009).

These centres are likely to comprise a community hall, meeting rooms, crèche, kitchen facilities and other local community service facilities, for example, rooms that can be used by community nurses, and would provide operating bases for any relevant community development programs that Council may from time to time run.

## 5. CONNECTIVITY

Effective systems for pedestrian, bicycle, public transport and motor vehicle movement are critical to build a strong community. While private motor vehicles remain the most frequently used transport mode, there are high social, economic and environmental benefits associated with reducing car dependency. These include:

- Reducing greenhouse gas emissions;
- Reducing car operating costs, improving household budgets;
- Increasing health benefits from physical activity, such as walking to destination or public transport, and cycling;
- Providing equitable access to transport for those unable or unwilling to drive for example, the elderly, the young, people with medical conditions, or stay at home parents in households with only one car which is needed for the partner's commute to work.

Buckland Park's Master plan aims to reduce levels of dependency on car ownership, particularly the necessity for households to purchase a second car. This will be achieved through a combination of:

- A network of on-street and off-street pedestrian and cycle paths to link residential precincts as directly as possible with centres and employment precincts;
- Provision of a community bus service from the beginning of residential occupation. The service will link residential precincts with centres within Buckland Park, and with larger centres in Virginia, Angle Vale and Elizabeth, Salisbury and Munno Para. The bus service will link Buckland Park to the metropolitan rail network.

Effective and inviting pedestrian and cycling environments are a function of urban design, specifically the relationship of a legible and permeable street network to destinations such as parks, centres, schools and public transport stops.

These factors have been considered in Buckland Park's Master plan, which identifies key centres, schools and the major roads and linear parks needed to connect them.

Self containment, which will reduce the need for work commuting, has been addressed in the Master plan by including land for employment opportunities, services and social infrastructure.

### 5.1 Transport Planning

The approach to Buckland Park's transport planning differs from the historical approach taken in Adelaide. (Parsons Brinckerhoff 2008)

Buckland Park's Master plan aims to achieve a high level of self containment for day to day trips, in terms of services (schools, retail, social services, commercial etc), and higher levels of other employment than is typical in other new and growing suburbs in Adelaide. This is facilitated by the site and proposal's scale, which is unusual in the Adelaide context.

By comparison, most other new or growing residential suburbs offer low levels of trip containment, relying instead on existing services in other adjoining areas.

Buckland Park's scale and control by a single entity has facilitated the preparation of a Master plan. It will guide the proposal's creation over a 25 year period, ensuring workable pedestrian, bicycle and bus routes are implemented to connect all of the main land uses.

Transport planning on this scale will provide benefits to the new community and bus service providers.

However, the creation of effective pedestrian and cycling movement systems will largely be delivered through detailed urban design, which will take place prior to approval of the land division of each stage.

The Master plan will guide detailed design, ensuring bike, pedestrian and bus routes are efficiently connected between stages.

## 5.2 Public Transport Services

In other new and growing suburbs in Adelaide, bus services are typically provided as incremental extensions of existing service arrangements. Each increment follows well after residents have occupied the new area, meaning there is a lag in public transport provision. By the time public transport is provided, residents have established car reliant travel patterns, and may have made expensive commitments to second cars. This can be seen in Golden Grove and Munno Para (Parsons Brinkerhoff 2008).

As described above, Buckland Park's Master plan will guide the progressive implementation of bus routes between stages, maintaining their efficiency.

In addition, the proponents will provide a community bus service to residents at the beginning of occupation. This service will comprise a small bus providing regular services to Virginia, Munno Parra and to connect with the Route 900 service to Salisbury and Elizabeth and suburban rail interchanges.

It is understood that such services have not been provided in other new suburbs.

Buckland Park can be compared to Gawler, located 38 kilometres from the Adelaide CBD.

Unlike Buckland Park, Gawler has no internal regular public transport service aside from a small community bus. Thus while there is a reasonably high level of trip containment, there is a higher dependency on the use of cars for day to day activities, such as trips to school, shops and other personal business.

Unlike Buckland Park, Gawler has no dedicated pedestrian and cycle infrastructure and routes, making walking and cycling inconvenient and encouraging car dependency.

Buckland Park will have a convenient and well planned internal bus system, integrated with its centres and cycle and pedestrian network.

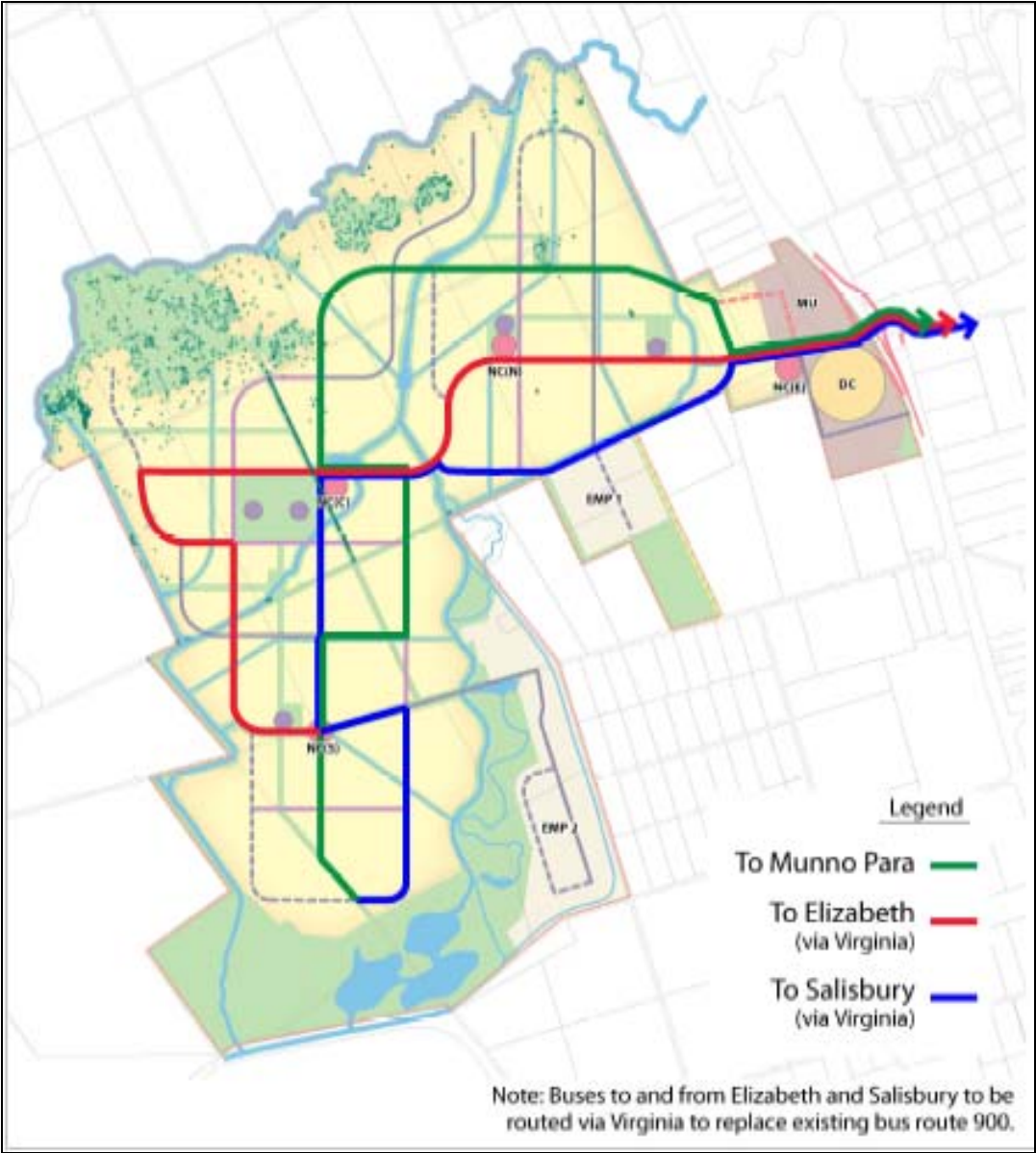
Parsons Brinckerhoff (2008), in consultation with the Department for Transport Energy and Infrastructure (DTEI) have prepared a public transport strategy for Buckland Park.

Figure 5.1 shows the bus routes. These routes facilitate access to Buckland Park's centres, schools and employment precincts. An interchange including a 'Park and Ride' facility can be with the District Centre, where local services will terminate and regional services will enter the site.

Regional bus routes will serve Munno Para, Elizabeth and Salisbury rail interchanges and centres.

A standard, Metroticket bus service will be progressively implemented between 2021-2031.

**Figure 5.1: Proposed Bus Network Buckland Park**



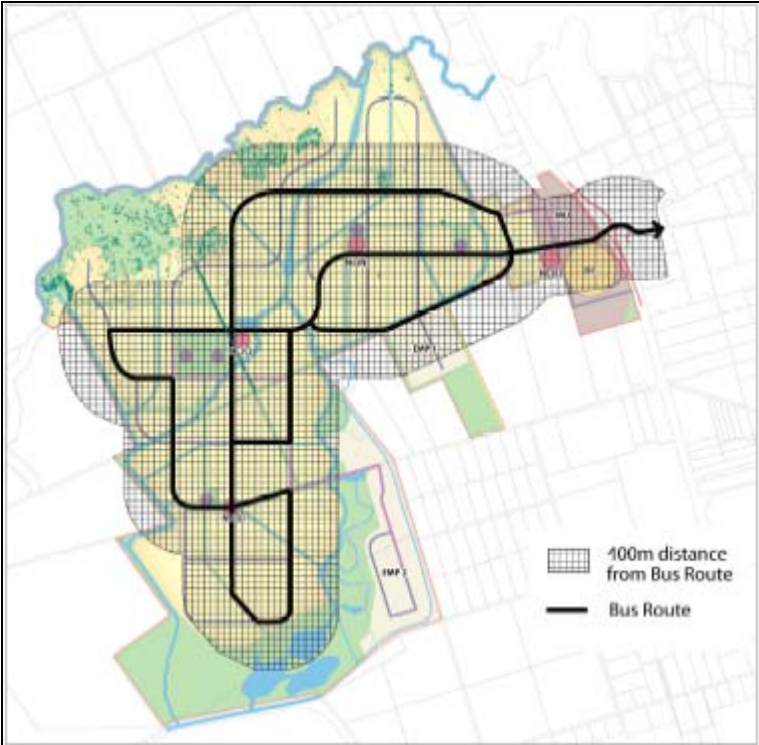
Accessibility to public transport is a combination of these factors:

- The distance between origins/destinations and the bus stop;
- The frequency, speed and reliability of services.

400 metres is the maximum comfortable distance people will to walk to reach a bus stop.

This threshold has been overlaid across the Master plan as shown in Figure 5.2. It can be seen most future residential areas are within 400 metres of a bus transport stop.

**Figure 5.2: Bus Network Accessibility**



Ensuring the frequency, speed and reliability of public transport services are sufficient to make public transport an attractive option for Buckland Park residents will require cooperation between the proponents, Playford Council and DTEI to ensure each stage contains the bus routes and facilities it needs to support an effective bus service.

As described above, the Master plan will guide the progressive implementation of the bus routes through future stages.

The proposed public transport network provides links to key destinations within and beyond Buckland Park.

**5.3 Stage 1**

Route 900 currently provides a weekday service between Virginia, and Elizabeth and Salisbury Rail Interchanges.

A Buckland Park community bus service will be operated by the proponents to provide public transport for Buckland Park’s first residents. (Parsons Brinkerhoff 2008)

It will provide commuter services to connect residents with the 900 bus.

It will take children to school in Virginia and Gawler.

Outside of commuter and school travel hours it will be available for other community activities. These will include services to Elizabeth to enable residents to access shopping and other services.

Stage 1 includes bike routes through the street network and linear parks to connect houses with the Neighbourhood Centre and school site.

## 6. COMMUNITY IDENTITY

Urban design and a community building programs contribute to a strong of community identity.

Urban design is a passive, but potentially powerful tool to create an identifiable character.

A community building program is an active technique, which must be commenced from the occupation of the first house. The proponents are committed to this process. Community building is also essential for effective marketing.

### 6.1 Design Themes

Given Buckland Park's scale, the whole proposal, and each stage, and precinct within those stages, will require its own character and identity.

Techniques to be employed within Buckland Park include:

- Themed precinct and street naming, which will be used in street signs and landscape entry statements. Buckland Park's natural, Indigenous and European heritage will be used as sources for these names ;
- Creation of meeting places such as parks, community facilities, shops and cafes.
- Themed street furniture and paving within precincts and centres;
- Themed landscaping within precincts and centres;
- Creation of landscape features and enhancement of existing natural features, for example river red gum woodlands, the Gawler River and creeklines, and the site's agricultural hinterland;

The urban design principles applied in the public domain will be followed through into the Design Guidelines applied to the designs of homes and public buildings.

Residents will feel confident their neighbours will build homes to the same standard as they are.

### 6.2 Community Building

The proponents are committed to facilitating an inclusive, active and sociable community at Buckland Park. This is fundamental to attracting future residents, and therefore fundamental to the proposal's success.

The first component of the community building programme is the provision of a community space which will provide a venue for community based activities.

The second component is the provision of community worker to facilitate those activities.

The third is funding for those activities.

Together, these three components provide the opportunities for residents to meet and form the social connections which build communities.

As the community matures, it is envisaged many community building activities will be initiated by the residents themselves, for example, forming sports teams, informal groups and clubs, and of course, there will be private social interaction.

The proponent will continue to have a role in some of these activities, for example, sponsoring cultural, sporting and school events.

It is not possible to timetable and list these events, this will evolve with the community.

The proponents facilitate community building in all their new residential projects. Two recent examples are Rhodes Peninsula in Sydney, and Mt Barker in Adelaide. The photos below illustrate the types of activities facilitated and funded by the proponents



**Mt Barker - - Get to know your neighbours**



**Rhodes Peninsula – Christmas Carols**



**Rhodes Peninsula – Playground Opening**



**Mt Barker– Get to know your neighbours**



**Rhodes Peninsula – Easter Hunt**



**Mt Barker – Get to know your neighbours**

### 6.2.1 Stage 1

A position for a dedicated community officer will be funded. The officer will commence work at the beginning of Stage 1's occupation, commencing in 2013. A community space with the necessary office equipment will be provided in Stage 1's Neighbourhood Centre.

The Community Officer will undertake the following activities:

- Get to know new residents, which will assist them with their other responsibilities;
- Organise targeted community activities, such as children's excursions, and the events described below;
- Facilitate the creation of community groups such as a business owner groups, Neighbourhood Watch, Playgroup, Mother's groups or other special interest groups;
- Liaise with Council and the State government agencies regarding activities or programmes of interest to the community, and provide information to those agencies on issues within the growing community;
- Coordinate the use of the community bus outside of its commuter and school bus services, so that it provides an asset to other parts of the community;
- Provide residents with information on the programmes and activities offered by Council and State government agencies;
- Provide residents with information on planning and construction activities within Buckland Park, and conversely provide the proponents with information on how these activities may affect residents. A Buckland Park Construction Management Group will be established with representatives from the proponent, builders, Council, Police and residents to ensure construction occurs in a timely and safe manner, minimising impact on existing residents;
- Liaise with Playford's sporting and cultural organisations and providing information to them, and the Buckland Park community, on groups and activities which may be of interest to both;
- Prepare a community newsletter and managing the community website;
- Provide a point of contact for Virginia's existing community.

### 6.3 Welcome package

A welcome package will be provided to all new residents at Buckland Park. This pack will include the following:

- Welcome letter describing the community and planning and construction activities;
- Council, relevant government agencies, emergency and other useful contacts;
- Local business details;
- Community facilities;
- Upcoming events;
- Transport information, including bus timetables and routes;
- Community website information and password;
- Information on sustainability initiatives in place;
- Information on the site's biodiversity attributes and their responsibilities.

#### 6.4 Community Events

A range of community events will be arranged by the Community Officer. The nature and scale of these events will vary as the community becomes progressively occupied. Some events will be organised for all residents, and there will be smaller events for precincts or streets. Potential events include:

- Meet the street;
- Community barbeques and picnics;
- Seasonal events, such as Christmas Carols or Easter parades;
- Community planting days, to engender a sense of responsibility and ownership of the site's biodiversity assets;
- Sporting and cultural activities;
- Community planning days, to engender interest in the design of public parks and spaces, buildings and urban design;
- Cultural events, potentially involving the Kurna people, religious and ethnic group activities.

#### 6.5 Community Facilities

In the early phase of Stage 1's occupation, the Community Officer will have an office and space for community activities within the Neighbourhood Centre of approximately 200m<sup>2</sup>. This will be expanded to 400m<sup>2</sup> as Stage 1 progresses. This community centre will remain until the Neighbourhood Centre is decommissioned (Connor Holmes 2008a)

It is likely the community centre will be combined with the sales office and display centre.

It is recommended a community centre be located in or adjacent to each of the Neighbourhood Centres.

The form and location of future community facilities should be determined through a community engagement process and survey of community needs, closer to the time of provision.

#### 6.6 Information for Residents

A community website and newsletter will provide residents with information on upcoming events, planning and construction progress and other relevant information.

#### 6.7 The Virginia Community

A consultation programme will be commenced upon lodgement of the Buckland Park EIS, facilitated by the Virginia Horticultural Centre. Existing residents will have an opportunity to comment through the formal EIS exhibition process.

Subject to the proposal being approved by the Governor, the Community Liaison Officer will be available to provide ongoing information to the community as Buckland Park's construction and occupation progresses.

## 7. SUMMARY

At Buckland Park, as with any new or growing suburb, providing community facilities and services, and engendering a sense of community will contribute to the community's sustainability and attractiveness.

The following are considered key elements to achieve the Buckland Park vision and building a strong community at Buckland Park:

- Good urban design;
- Housing diversity;
- Accessible and appropriate human service provision;
- Effective physical connections between houses, parks, centres and employment;
- A sense of community identity.

Unlike other new and growing suburbs, Buckland Park's scale will support the establishment of efficient and master planned:

- Retail and commercial services;
- Employment close to home;
- Recreation and sporting facilities;
- Community services and facilities;
- School, pre-school and child care facilities;
- Public transport, pedestrian paths and bikeways.

The Master plan will guide the progressive and coordinated implementation of these elements between 2010, when construction commences, and 2036 when the last house is occupied. It will inform and guide the detailed design of each stage.

Residents' access to these services and facilities will be enhanced by good urban design, community engagement in planning and the potential shared use of facilities.

Urban design has a strong role to play in strengthening the identity of Buckland Park and creating unique physical characters in each precinct. Residents will feel a sense of pride and belonging within their unique neighbourhood.

A Community Building Program will be implemented by the proponent, including:

- A dedicated Community Officer;
- A range of community facilities;
- Community event organisation;
- Resident welcome pack;
- Buckland Park Community Website and Newsletter.

## 8. REFERENCES

- Australian Bureau of Statistics, *Child Care Australia 2005*, Catalogue No. 4402.0
- Australian Bureau of Statistics, *Schools Australia 2007*, Catalogue No. 4221.0
- City of Playford *Recreation and Sport Plan 2002 – 2007*
- Connor Holmes *Buckland Park Demographic Analysis 2008*
- Connor Holmes *Buckland Park Centres Planning 2008a*
- Connor Holmes *Buckland Park Affordable Housing 2008b*
- Department of Health *South Australia's Health Care Plan 2007-2016*
- Department of Planning and Local Government Website, accessed 15 December 2008.
- Minister for Urban Development and Planning, News Release, *Consultation for 20 Year Plan Begins* 10 November 2008
- Parsons Brinckerhoff *Buckland Park Traffic Impact Assessment 2008*
- Personal Communication Mr Vince Demasi, Manager Strategic Property Management Portfolio, Department of Education and Children's Services, 31 January 2008.
- Personal Communication, Superintendent Ferdinand Pit, Officer in Charge Elizabeth Local Service Area, South Australian Police Service, 13 November 2008.
- Planning SA website, accessed November 14 2008
- Meeting with the Department of Education and Children's Services, 16 September 2007.
- Meeting with the Department of Education and Children's Services, 20 November 2007.
- State of Queensland *Crime Prevention through Environmental Design – Guidelines for Queensland, 2007*

## 9. GLOSSARY

ABS: Australian Bureau of Statistics

DECS: Department of Education and Children's Services

FTE: Full Time Equivalent

LGA: Local Government Area

Net Residential Area: Area (hectares) available for residential development excluding non-residential uses such as open space, schools, centres and roads.

Net Residential Density: Number of dwellings per hectare net residential area.

SAPOL: South Australian Police Service