

LOCHIEL PARK OUR ACHIEVEMENTS



RenewalSA
people partnerships progress

Lochiel Park.
Campbelltown *Living with nature.*



PEOPLE PARTNERSHIPS PROGRESS

Renewal SA's Lochiel Park Green Village project, situated in idyllic surrounds adjacent the Torrens Linear Park at Campbelltown, is clear demonstration of our dedication to developing accessible, connected places where people want to live, work and play. Partnerships and consultation with community, industry and organisations drive the future we are building, together.

The much-awarded Lochiel Park is now complete and has been transferred to the City of Campbelltown, a great example of Renewal SA's innovative approach to urban development. Since first proposed as a demonstration project in 2004, Lochiel Park today has become a nation-leading green village that is home to some 150 residents. Significantly, Lochiel Park has also proved highly successful in promoting sustainable lifestyles, building design and technology.

It is this kind of innovation that is unlocking the greater potential of existing urban areas, enhancing the distinctive South Australian lifestyle with excellence in planning and lasting quality in execution.

Our expertise and influence encompass infrastructure, transport, economic and environmental viability. With a streamlined and coordinated approach, we create energising opportunities and living progress.

LOCHIEL PARK

LIVING WITH NATURE

The design of the Lochiel Park green village aims to improve the connections, integration and relationships between the natural and built environment.

The Lochiel Park development includes over 10 hectares of open space comprising an urban forest, wetlands and a variety of different recreational areas which will provide education, ecological and visual amenity. The future of the open space is protected by the Lochiel Parklands legislation.

Allotments have been sited and oriented to optimise access to open space, views and sunlight and to reduce the ecological footprint.

The project demonstrates the benefits of smaller lot development where greater emphasis is placed on creating a more dynamic, stimulating and higher quality public domain, which facilitates more frequent interaction with neighbours and the creation of a community rather than just a collection of houses.





LOCHIEL PARK – A NATION LEADING GREEN VILLAGE

In 2004, the South Australian Government announced that Lochiel Park, a former government educational and training centre site adjacent the River Torrens in suburban Campbelltown, would be transformed into a demonstration housing development set within natural parklands.

The ambitious aim – since achieved – was to develop the 15ha site into a model “green village” of national significance; incorporating a range of sustainable technologies that will serve as a showcase for other urban developments both within SA and nationally.

In addition to these significant green credentials, Lochiel Park contributes to the following State Government strategic priorities:

- ▼ An affordable place to live
- ▼ Safe communities, healthy neighbourhoods
- ▼ Every chance for every child
- ▼ Creating a vibrant city

The State’s urban development authority, Renewal SA, was the developer of what has become renowned as a practical demonstration of the government’s vision for sustainable living. In less than a decade, Lochiel Park has become a multi-award winning green development populated by an enlightened community committed to living sustainably through:

- ▼ Efficient and sustainable water use
- ▼ Housing designs that work with nature
- ▼ Efficient energy and use of renewable energy
- ▼ A holistic approach to the environment, heritage and community
- ▼ Making the most of locally-produced materials.

Lochiel Park was master planned on sustainability principles, conservation of resources and establishing innovative housing products on a scale not seen before in Adelaide. Renewal SA controlled the parameters of the development, providing clear guidelines to selected builders, and developed tools to assist builders in meeting the design encumbrances and performance targets.

These performance targets – reducing potable water consumption by 78%, greenhouse gas emissions by 74% and energy use by 66% compared to the SA household average in 2004 – place Lochiel Park at the leading edge of contemporary residential development in minimising its impact on the planet.

A collaborative approach by Renewal SA fostered close relationships with industry, universities and other experts to ensure Lochiel Park was, and remains, at the forefront of innovative sustainable residential development in Australia.



SUSTAINABLE THINKING AND TECHNOLOGY SHOW

Lochiel Park Green Village exemplifies South Australia's Strategic Plan environmental targets by demonstrating that well-planned contemporary living can reduce ecological and carbon footprints while creating a sense of harmony with nature:

- ▶ The development involved the construction of over 100 dwellings within 4.25ha of the 15ha Campbelltown site, almost doubling the housing density from the Adelaide average of 13 dwellings per hectare.
- ▶ All homes within Lochiel Park are serviced by solar photovoltaic cells, recycled water and gas-boosted solar hot water systems and achieve a minimum 7.5 star thermal performance. The development's energy and water use performance will be monitored until 2018 in keeping with the original vision of creating a showcase for best practice sustainable technologies.
- ▶ The estate features a recycled stormwater third-pipe water supply system to provide for toilet flushing, cold tap on washing machines, garden use and parkland irrigation. The system is supplied by harvesting stormwater from the surrounding 190-hectare catchment area: the collected water is cleaned through Lochiel Park's wetlands and stored in an aquifer storage and recharge scheme. It is expected to be fully operational in mid 2015.
- ▶ Water sensitive urban design initiatives such as wetlands, clean stormwater collected from an adjacent 70 hectare urban catchment (separate to the recycled stormwater catchment of 190 hectares) and bio-filtration pits and swales in the road infrastructure before discharge into the River Torrens.
- ▶ Construction of the reserve and public realm made use of recycled and low embodied energy materials including recycled aggregate and fibre-reinforced concrete; pavers manufactured on-site from recycled waste materials and clay excavated from the wetlands. Recycled pavement products were used in the road base within Lochiel Park.
- ▶ Street and park lighting within Lochiel Park is provided through a mix of solar and high-energy efficiency technology.
- ▶ Development of a community garden within the estate, maintained by residents, provides a local "food bowl".
- ▶ A 10ha urban forest comprising tens of thousands of plantings has created a biodiversity corridor and can in future offset operational greenhouse gases from the housing development.
- ▶ Between 2009 and 2011, Lochiel Park incorporated an on-site Sustainability Centre that was open to the building industry and the public to help raise awareness of Environmentally Sustainable Design (ESD) initiatives. The centre also attracted people with an interest in innovative and sustainable medium-density housing development.

REDUCING THE DEVELOPMENT FOOTPRINT

Today, within a decade of first being announced, Lochiel Park has become home to a thriving community of more than 150 residents living in an energy and water efficient housing estate set within an attractive parklands setting. The development comprises some 70 private homes and 23 Housing SA apartments and townhouses (exceeding the government's 15% affordable housing target). Home building was restricted to 4.25ha within the 15ha site:

- ▶ Allotments range from 198sqm to 900sqm with an average size of 330sqm
- ▶ Rain water tanks supply all hot water
- ▶ Homes have the highest energy efficient appliances, fixtures and air-conditioning
- ▶ Each home has a minimum 1.0kW of PV solar cells per 100sqm floor area in addition to electricity demand management to reduce peak load

Lochiel Park is of such significance to the environmental and development future of Australia that it was selected as a case study as a nation-leading green village for the 2008 Garnaut Climate Change Review. Lochiel Park has won numerous awards, confirming its status as a nation-leading urban development:

- ▶ Awarded six 'leaves' as SA's first development to meet the six sustainability criteria for accreditation as an "EnviroDevelopment" with the Urban Development Institute of Australia (UDIA).
- ▶ UDIA national award for environmental excellence
- ▶ Planning Institute of Australia national award for planning excellence in urban design
- ▶ National Housing Industry Association GreenSmart award for Community Development and Resource Efficiency 2010
- ▶ Australasian Housing Institute Award for professional excellence.

In recent years, Lochiel Park has hosted a steady stream of national and international visitors, keen to see an outstanding example of low-energy building and urban development technologies in a real life setting. The project also provides a showcase of sustainability approaches and SA's leadership at national and international conferences.

In 2012, Renewal SA undertook a carbon emissions assessment of the infrastructure work which calculated 1816 tonnes of carbon was emitted in the construction of roads, provision of water and power services, landscaping and other community amenities. In that same year an independent study found that Lochiel Park was tracking at a 64% reduction in energy use, a 60% reduction in potable water use (recycled water not then connected) and a 54% reduction in greenhouse gas emissions (when compared with the SA household average from 2004). The planting of trees and native plants at Lochiel Park is ongoing, and to date over 200,000 local species have been planted throughout the development, including the area occupied by the two wetlands and the urban forest adjoining the River Torrens.

In August 2013, construction was completed on South Australia's first 'zero carbon' home, located within Lochiel Park. Featuring a 7.5 star energy rating and innovative wall construction, the three-bedroom home demonstrates the future direction of low energy, sustainable housing in South Australia: the 680 kg of carbon dioxide produced by the home over its 50-year life will be offset within 32 years by a 3 KW solar PV system.

"Ongoing research, a partnership between the University of South Australia, the SA Government and the residents of Lochiel Park, has found householders experience enhanced levels of thermal comfort, unprecedented energy efficiency and high levels of social sustainability."

"Through a combination of physical design and policy action, the estate fosters a heightened sense of community which is celebrated by the residents."

Stephen Berry, Researcher,
Barbara Hardy Institute,
University of South Australia

PROJECT TIMELINE



2004 - Then Premier Mike Rann announces vision for South Australia to develop a 'national leading model green village' incorporating ESD technologies at Lochiel Park

2005 - Commencement of master planning for the 15ha site, located at Campbelltown, 8km north-east of the Adelaide central business district
Demolition of old TAFE and Metropolitan Fire Service training facilities and early site works

2006 - Public launch in October 2006 with marketing focussed on the theme of nature and environmentally sustainable features

2010 - Completion of all major infrastructure works and public realm

2011 - Completion of Housing SA affordable housing development within Lochiel Park, comprising 23 medium-density dwellings (apartments and townhouses)

2012 - Confirmation of carbon neutral status for Lochiel Park's infrastructure

2013 - Construction completed on South Australia's first 'zero carbon' home, located within Lochiel Park
Responsibility for maintenance of public realm and open space handed over to Campbelltown Council

2015 - Delivery of recycled water to Lochiel Park residents scheduled for mid 2015

2018 - Completion of environmental monitoring program

WHAT IS OUR ROLE

As the developer at Lochiel Park, Renewal SA has been responsible for the following activities:

- ▼ Engaging with community and stakeholders
- ▼ Master planning and design
- ▼ Construction of infrastructure and public realm
- ▼ Subdividing and selling residential allotments
- ▼ Monitoring and overseeing built form outcomes
- ▼ Facilitating place and community activation
- ▼ Monitoring and evaluating project sustainability targets (water, energy, greenhouse gas)
- ▼ Transferring control of the project site to City of Campbelltown.

Overall project outcomes	Cumulative progress by June 2015
Sale and settle 76 residential allotments	Achieved 2013-14
Construction of 103 dwellings	Achieved 2013-14
Achieve 15% affordable housing	Achieved 2013-14 (22%)

In 2014-15, Renewal SA aims to deliver the following specific outcomes at Lochiel Park to finalise its involvement in the award-winning development:

- ▼ Complete commissioning of the recycled water system
- ▼ Continue evaluation of environmental outcomes to measure energy efficiency and water reduction measures and implement
- ▼ Review and close the project (including transition of ongoing evaluation and monitoring responsibilities task to ongoing resource following project closure)
- ▼ Establish the project as a living laboratory under the CRC for Low Carbon Living.

FIND OUT MORE

lochielpark.com.au

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