Sharland Park Eco Display Home

Home owners, architects and developers will be able to visit the Eco Display Home to learn how to save water and gain greater energy efficiency around the home.

An initiative of Barwon Water in collaboration with the Gordon Institute of TAFE and the Plumbing Industry Commission, the home will demonstrate the latest technologies, including stormwater and greywater recycling systems, energy efficient design and drought tolerant landscaping.

Based on a standard design from a local building company, the home will be enhanced to achieve an 80 per cent reduction in energy use.

During construction the display home will be used as an educational resource for industry apprentices. When complete, it will be open to the public for a period, then offered for sale.

Water savings will be achieved by:

- fitting water-efficient shower heads, aerators, flow regulators, hose triggers and tap timers to limit water use
- installing a rainwater tank to collect run-off from the roof and a greywater system to collect water from showers and washing machines
- selecting drought-tolerant plants which thrive on minimal water, and mulch to improve soil condition and water absorption.

Energy efficiency will be improved by:

- designing windows to maximise winter sun and minimise summer swelter
- insulating walls, ceilings and floors
- incorporating high thermal mass to stabilise internal temperatures
- designing the house to take advantage of the seasonal changes of the sun's position
- incorporating solar technology for hot water and space heating
- installing high star rating and A-rating energy-efficient appliances.

The future of home design

The Victorian Government has announced that from July 2004 all new homes in Victoria must feature a greater range of energy-efficient and water -saving features.

Victoria's new 5 Star rating for residential homes will benefit the environment, drive innovation and deliver savings for consumers.

To comply with the new design standards, all new homes will require:

- a 5 star energy rating for building fabric plus water saving measures
- a rainwater tank, or
- a solar hot water service.

In return, owners will achieve reduced water consumption, and lower energy bills through improved insulation and greater solar efficiency.

For more information visit: www.seav.vic.gov.au

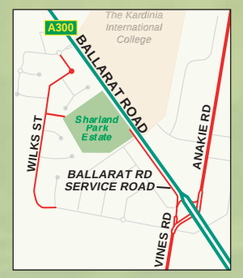
Take advantage of government incentives

Protect the environment and be rewarded. The Victorian Government Water Smart Gardens and Homes rebate scheme offers rebates on eligible water-efficient products such as rainwater tanks, permanent greywater systems and more.

- Full terms and conditions on the scheme are available at www.nre.vic.gov.au/waterrebate or from **Barwon Water on 1300 656 007.**

Barwon Water

How to get to Sharland Park



Sharland Park is located at Melway ref: 441 D6, opposite the Kardinia International College.

Entry is via Ballarat Road Service Road, off Vines Road, Hamlyn Heights.

A pedestrian access is also available off Wilks Street.

SHARLAND PARK ESTATE

the future of urban living

Further information

Sharland Park Estate

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Sustainable energy

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Contributing photographers: Cricket Saleh and Third Ecology Pty Ltd

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SHARLAND PARK ESTATE

Discover why Sharland Park Estate is an emerging showpiece for urban development in Geelong

- *Geelong's first Water Sensitive Urban Design residential development*
- *The first estate to recycle urban stormwater for parkland irrigation in Geelong*
- *Geelong's first water and energy conservation demonstration home*

Barwon Water

the future of urban living

I am proud to introduce Sharland Park Estate – the future of urban living.

Recent years of drought and the effects of prolonged low rainfall have drawn attention to our most precious resource – water.

In our Water Resources Development Plan (WRDP), released in March 2003, Barwon Water has adopted water conservation as our priority issue. During the consultation phase we were challenged by the community to lead the way by making the most efficient use of existing water resources, ahead of developing new ones.

Nearly two-thirds (62 per cent) of all water supplied to our customers is used for residential purposes. Of that, each landowner uses 35 per cent on garden watering. Urban living environments therefore provide a great opportunity to achieve real water savings.

As part of the WRDP, Barwon Water has redeveloped the decommissioned Bell Post Hill water service basin into a water-sensitive residential subdivision.

Sharland Park Estate has been designed and built by Barwon Water to demonstrate how water can be better managed in urban living environments, using techniques collectively called Water Sensitive Urban Design (WSUD).

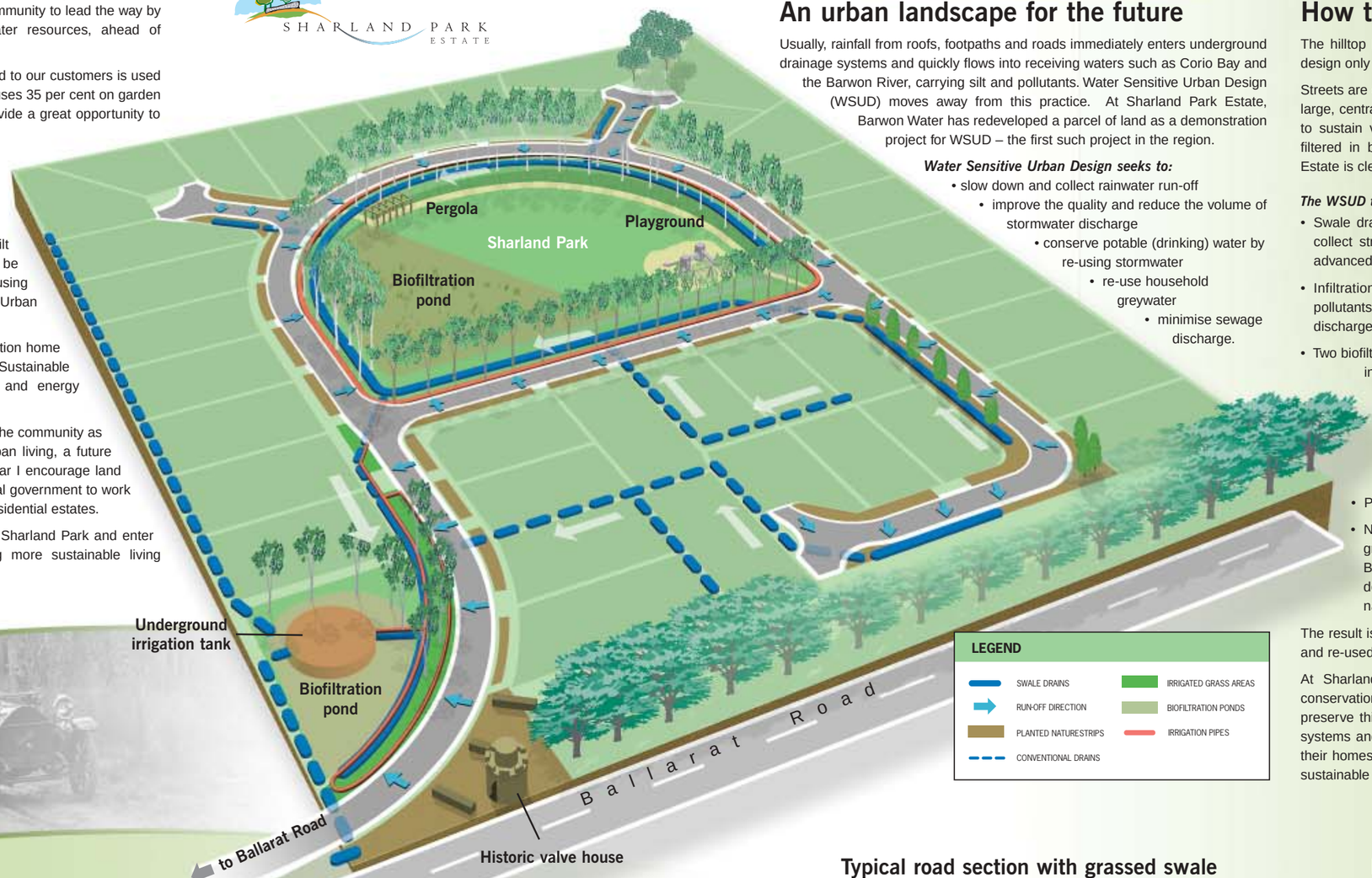
In addition, Barwon Water is building a demonstration home on the estate to showcase the latest Ecologically Sustainable Design (ESD) principles – focusing on water and energy efficiency.

We offer the estate and the Eco Display Home to the community as demonstrations of our vision for the future of urban living, a future more in balance with our environment. In particular I encourage land developers, architects, the building sector and local government to work together to integrate similar solutions into more residential estates.

I also invite all prospective residents to embrace Sharland Park and enter this partnership, as we move towards building more sustainable living environments.

Stephen Vaughan
Chairman

SHARLAND PARK ESTATE



An urban landscape for the future

Usually, rainfall from roofs, footpaths and roads immediately enters underground drainage systems and quickly flows into receiving waters such as Corio Bay and the Barwon River, carrying silt and pollutants. Water Sensitive Urban Design (WSUD) moves away from this practice. At Sharland Park Estate, Barwon Water has redeveloped a parcel of land as a demonstration project for WSUD – the first such project in the region.

Water Sensitive Urban Design seeks to:

- slow down and collect rainwater run-off
- improve the quality and reduce the volume of stormwater discharge
- conserve potable (drinking) water by re-using stormwater
- re-use household greywater
- minimise sewage discharge.

How the estate works

The hilltop location of Sharland Park Estate means that the drainage design only needs to manage stormwater from this estate.

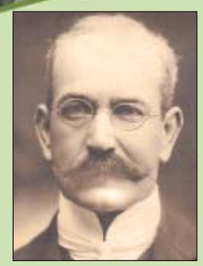
Streets are constructed to allow run-off to flow onto naturestrips and the large, central park. Here some run-off seeps into the groundwater table to sustain vegetation on the estate. Surplus run-off is collected and filtered in biofiltration ponds to ensure water leaving Sharland Park Estate is cleaner and less harmful to downstream ecosytems.

The WSUD techniques at Sharland Park Estate include:

- Swale drains along naturestrips (grassed, graveled or vegetated) to collect street run-off. These are protected from soil compaction by advanced tree planting, groundcover vegetation and bollards.
- Infiltration trenches under the swales containing sand to filter pollutants and a porous PVC pipe to carry surplus water, including discharges from homes.
- Two biofiltration ponds to retain, filter and purify run-off. One is located in Sharland Park and the other near the entrance to the estate. They are planted with inundation tolerant vegetation and will only hold water during heavy storms.
- A 120,000 litre underground tank beneath the lower biofiltration pond to hold filtered stormwater for irrigation of part of Sharland Park.
- Permeable gravels are used for pathways where possible.
- Naturestrips are mulched and planted with drought tolerant groundcovers to reduce the need for watering by residents. Barwon Water and the City of Greater Geelong have developed a partnership to monitor the progress of these naturestrips.

The result is an attractive neighbourhood, where stormwater is retained and re-used, often in place of drinking water.

At Sharland Park, residents will have an opportunity to embrace conservation. By caring for the swales and plantings, residents will preserve this quality landscape and contribute to healthier stormwater systems and waterways. By incorporating water-efficient principles into their homes and gardens, landowners will play an important role in the sustainable management of a valuable resource.



A park with history

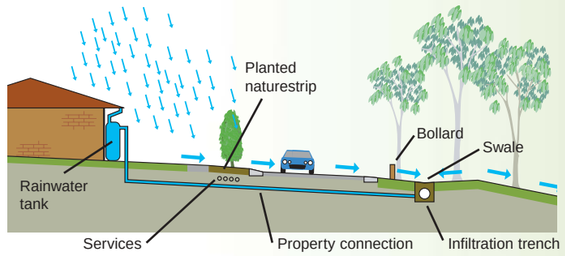
Sharland Park Estate recognises the contribution made to Geelong by James S. Sharland (pictured), founding secretary and hydraulic engineer of the Geelong Waterworks and Sewerage Trust from 1910, and Engineer-in-Chief from 1917 until his retirement in 1935.

During Mr Sharland's tenure, many advances were made to Geelong's water supply including development of the Moorabool supply system.

The central feature of the estate is Sharland Park, a public open space. Designed around the floor of a former circular water basin, the park takes the form of an attractive, slightly sunken amphitheatre containing landscaping, wetlands and community features.

Decommissioned in 1985, the basin's unique valve house, now classified as a heritage structure, has been relocated to the estate's entrance.

Typical road section with grassed swale



Infiltration trench