Purpose

This fact sheet has been prepared to provide an overview of the type of water servicing solution that LandCorp is currently proposing for the new residential development in Gracetown and the existing town. This information has been summarised from the detailed technical studies that have been prepared to support the Gracetown amendment.

The Role of the Community

The community and key stakeholders have provided input into the development of the proposed water solutions through the Sustainable Technologies Workshop, Community Design Session and the Community Information Day and other forums during the initial concept development phase.

The preferred model for water services identified at these workshops was to provide an integrated and sustainable sewage treatment and water service to Gracetown.

Sustainable Water Solutions

The model selected after consultation with the community, involves the use of rainwater tanks for drinking water, supplemented with high quality reclaimed water for non-drinking purposes supplied from a water reclamation plant.

A reclaimed water distribution network and a sewage collection system will be established, providing a common infrastructure solution to both the existing and the new properties at Gracetown.

Benefits of this system will include:

- Decommissioning of existing septic tanks preventing further contamination of the local groundwater;
- Removing the burden of septic tank management for existing property owners;
- A reliable wastewater management solution;
- The ‘greening’ of public open space;
- Surplus reclaimed water may be used to recharge the local groundwater aquifer;
- Reclaimed water will be available for firefighting in Gracetown with new hydrants to be installed in both the existing and new residential areas; and
- Use of reclaimed water for non-drinking purposes within the house retains rainwater for higher purpose uses.

LandCorp’s vision for the new development at Gracetown is a community that will embrace and maintain the character of the existing townsite and celebrate the cultural and built heritage of the area, whilst minimising the impact on the landscape and coastline.

To ensure appropriate land use zoning and high level planning, controls are in place to guide the proposed residential development at Gracetown. LandCorp are seeking an amendment to the Shire of Augusta-Margaret River’s Local Planning Scheme No. 1.

This series of fact sheets has been developed to provide a summary of information based on the topics which the community has demonstrated a strong interest in during the preparation of the development concept.
How will potable water be supplied?

Drinking water will be provided by harvesting roof water in individual rainwater tanks which are privately owned by landowners on each lot.

For new tanks, it is anticipated that water quality will be managed by the installation of ‘first-flush diverters’ for primary filtration, domestic ultraviolet light disinfection and a maintenance and inspection regime.

Within new homes, owners will be required to install water efficient fixtures and appliances. Use of water efficient fixtures and appliances in homes is projected to reduce in-house water use by about 25 per cent. The provision of a reclaimed water supply is expected to reduce in-house drinking water use by a further 25 per cent.

If existing homes connect to the non-drinking water system, overall demand on rainwater tanks is expected to fall by approximately 50 per cent, thus improving water supply reliability.

By requiring the use of water-efficient fixtures and appliances and providing a separate non-drinking water supply, a reduced tank size should be sufficient to meet drinking water needs. The required tank size is a function of the available roof area, daily drinking water demand and annual rainfall. The management of individual rainwater tanks will be the responsibility of the individual land owner.

What is Reclaimed Water?

The reclaimed water system will deliver high quality, fit for purpose treated water directly into new and existing homes for non-drinking water use through a dedicated non-drinking water network (often referred to as a 3rd pipe system). The water will be required to meet standards set by the Department of Health and will be monitored under a strict regime. This water will be used for water supply to toilets, cold water inlets to washing machines, irrigation of gardens and public open space and for firefighting.

Properties within the new and existing areas of town will connect to a sewerage network which will then deliver wastewater to the reclamation treatment plant. The water will be treated and then gravity supplied to homes for non-drinking purposes.

In the drier months (October to April), water restrictions on external use from the reclaimed water supply of about 700 litres per week per house will likely be applied to effectively manage the supply. Homeowners will be encouraged to use a variety of water conservation measures including minimising irrigated areas, using irrigation controllers along with selecting native, low water requiring plant species in their gardens.
Water Reclamation Plant

The water reclamation plant will be located at the old tip site to the south of the proposed development. This facility will be designed to blend with the surrounding bushland to ensure that it is not visible from the existing townsite or other important locations such as the Cape to Cape walk trail.

The proposed water reclamation plant design uses state-of-the-art technology. The process involves a number of treatment methods currently being used across Australia and the world.

The plant will provide a multi-barrier treatment system including screening, oxidation ditches, membrane bio-reactors (MBR), ultraviolet light disinfection and chlorination ensuring a consistently high quality of reclaimed water. This treatment system will meet or exceed the requirements of the State and National water quality and health guidelines.

The reclaimed water will be stored within two large tanks (400 kL each) to be co-located with the water reclamation plant at the former landfill site above the town. The proposed site location and closed building design, will manage potential noise and odour issues.

All solid by-products of the treatment process will be collected for disposal at an approved tip site, although there may be an opportunity for beneficial reuse of the product for composting within the region.

How much will it cost?

LandCorp proposes to install sewer and non-drinking water services within the streets of the existing townsite, as well as in the new development area.

There are four components to the costs of existing homes being connected to the services in Gracetown:
1. the initial cost to retrofit wastewater connections for existing homes (approximately $5,000 to $10,000)
2. the initial cost to retrofit reclaimed water for existing homes (approximately $3,000 to $5,000);
3. the volumetric charge (approximately $150 and dependent upon usage); and
4. the annual availability charge (approximately $900 to $1,000).

The cost to retrofit existing homes will vary from home to home. Some homes will only need small alterations, while others may require replacement of pipes and fixtures because of increased water pressure through the new system.

LandCorp will be required to assist existing home owners with a contribution to the cost of connection to the wastewater network which will also encourage early connection to the system.

Annual usage charges will be set during the licensing process for the services, managed by the Economic Regulatory Authority (ERA). Annual charges will be based on an operations and maintenance cost-recovery basis. Financial models indicate that charges will follow similar pricing structures to those used by the Water Corporation and other service providers.

Stay Informed

To be kept informed on the progress of the Gracetown development please visit the project website at www.gracetown.landcorp.com.au
If you have any questions on the project, or the amendment process, please call the project information line on 1300 730 435 or email us at: gracetown@landcorp.com.au

Fact Sheet 1: Structure Plan and Local Planning Scheme Amendment
Fact Sheet 2: Environmental Management
Fact Sheet 3: Residential Concept
Fact Sheet 4: Community Infrastructure
Fact Sheet 5: Traffic Management
Fact Sheet 6: Services
Fact Sheet 7: Water Services

For more information call 1300 730 435 or email gracetown@landcorp.com.au