Construction Progress

APRIL - MAY 2018

LANCE CREEK TO POOWONG

The Lance Creek Water Connection project will provide a secure water supply for the region and a dependable environment for community development, economic growth and future investment.

Progress on the 20km Lance Creek to Korumburra section of pipeline is 89% complete and work on the 9km Korumburra to Poowong section is now well underway.

WATER SECURITY A HIGH PRIORITY

The Lance Creek Water Connection is a key component in South Gippsland Water's long-term strategy to secure water supplies for the region for the next 50 years.

In future years, South Gippsland's current catchment yields will reduce and will not meet the future growth and water demand of Korumburra, Poowong, Loch and Nyora. The project connects these towns with South Gippsland Water's largest reservoir, Lance Creek, which is also connected to the Melbourne Water Supply System.

The combination of these systems will secure water supply for the area. The townships of Wonthaggi, Inverloch and Cape Paterson are currently supplied by the Lance Creek Reservoir and, as a result of the Lance Creek Water Connection pipeline, will be provided with a secure water supply backed-up by access to the Melbourne Supply System.

Korumburra will be on Stage 3 water restrictions from 3 May 2018. The Little Bass supply system (Poowong, Loch and Nyora) is low and Stage 2 water restrictions are likely within the next month if current dry conditions persist.

It is anticipated that, as a result of the Lance Creek Water Connection, this will be the last season of water restrictions for these townships.

PIPELINE - Lance Creek to Korumburra

This section of the Lance Creek Water Connection pipeline extends from Lance Creek Water Treatment Plant to its Korumburra Water Treatment Plant. The pipeline is constructed using sections of polyethylene pipe and, where water pressure is greatest, ie. entering and exiting pump stations, steel pipe is installed.

SUMMARY
➢ 21.7km of construction corridor cleared, graded and fenced
➢ 525 lengths of 560 diameter polyethylene pipe (HDPE) delivered to site – 9.6km installed
➢ 789 lengths of 502 diameter steel pipe delivered to site – 9.7km installed
➢ Total of 20.16km of pipe delivered and 19.3km installed
➢ Pipeline construction work – approximately 89% complete

Milestone - final section of steel pipe in the Lance Creek to Korumburra portion of the pipeline was installed 24/04/2018

Reinstatement Works - With recent good weather, preliminary site reinstatement works have begun on properties between Lance Creek and Korumburra where pipe installation has been completed.

PIPELINE – Korumburra to Poowong

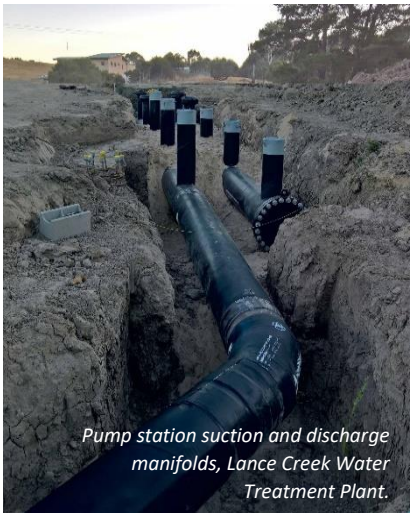
Site work for pipeline construction on the Korumburra–Poowong section of the project is on schedule with survey work, pipe delivery and earthworks progressing.

SUMMARY
➢ 8.8km of construction corridor cleared, graded and fenced
➢ 444 lengths of 225 diameter polyethylene pipe (HDPE) delivered to site – 5.9km installed
➢ Total of 8.8km of pipe delivered and 5.9km installed

Dual Pipeline - A 50 tonne excavator (right) has been brought in to add extra muscle to the excavation of a 2m wide trench needed for a 1.4km section of dual pipeline between the Korumburra Water Treatment Plant (WTP) and the Korumburra township.

One pipeline is part of the infrastructure that will transport water from Lance Creek WTP northward to the Korumburra WTP. The other will replace two existing, aged trunk mains that carry water from the Korumburra WTP southward to Korumburra. The project has provided a timely and economically feasible opportunity to upgrade water supply to Korumburra residents through the reticulated system.

WATER TREATMENT PLANT IMPROVEMENTS



Pump station suction and discharge manifolds, Lance Creek Water Treatment Plant.

Pump Station Construction

Lance Creek - A new pump station at the Lance Creek Water Treatment Plant will transport water from the Lance Creek Reservoir, across the hills of Kongwak and Jumbunna, to the Korumburra clear water storage - a total height difference or lift of 209m.

The pump station will initially be constructed with three pumps capable of pumping 140L/s but will have capacity for an additional two pumps to cater for future water demands.

Concrete pours for the new pump plinths are complete and concrete foundation edge beam works have commenced.

Korumburra – Construction has begun on a smaller pump station at the Korumburra Water Treatment Plant that will transfer the water to the Poowong Water Treatment Plant

It will have the capacity to pump at a flow rate of approximately 30L/s through to the Poowong Clear Water Storage basin.

800m of HDPE (polyethylene) pipe strings for the new Korumburra Pump Station have been welded and excavation works for its installation have commenced.

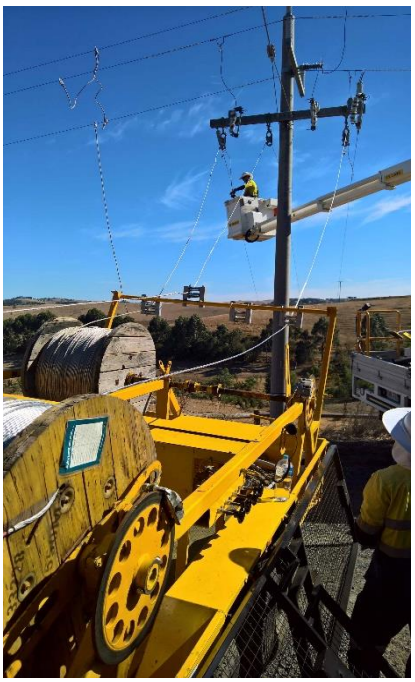
Processing Greater Volumes of Water

When the Lance Creek Water Connection is commissioned mid-2019, greater volumes of water will be processed at the Lance Creek Water Treatment Plant to supply Korumburra, Poowong, Loch and Nyora and to continue supply to Wonthaggi, Cape Paterson and Inverloch.

New chemical dosing infrastructure.

On the completion of this project the Lance Creek Water Treatment Plant will supply an average of 8 million litres per day.

Slight adjustments in the treatment process will enable effective treatment of greater volumes of water, ensuring that customers at both the start and the end of our distribution system are provided with an effectively treated, world-class water supply (refer to page 4).



Power upgrade, Lees Rd Glen Alvie.

Power Upgrades

To meet the demands of the treatment and supply of additional water to the pipeline, power upgrades at the Lance Creek Water Treatment Plant are currently underway.

So far 1,544m of new pole infrastructure and overhead conductors have been replaced between the water treatment plant and Lees Road, Glen Alvie. A new substation will also been installed at Lance Creek Water Treatment Plant.

To help support a more sustainable approach to water supply and distribution, a solar power installation is planned at Lance Creek in the near future to help augment capacity in the future and to feed into the power grid.

In addition to the capacity provided by the Lance Creek Reservoir, the Lance Creek Water Connection project will utilise an existing connection to the Melbourne water supply system.

This will provide townships connected to the Lance Creek supply system with the security of access to water from Cardinia Reservoir and the capacity to utilise water from the Victorian Desalination Plant.

FLUORIDATION

As a result of the Lance Creek Water Connection, residents of Korumburra, Poowong, Loch and Nyora will join the 90% of Victorians who already benefit from fluoridated water.

The fluoridation of water supply is a requirement of the Victorian Department of Health and Human Services. The safe and effective addition of fluoride to drinking water is regulated by the *Safe Drinking Water Act 2003*.

The fluoridation of drinking water contributes to overall health, wellbeing and quality of life. For further information, contact the Department of Health and Human Services.

CHLORINATION & CHLORAMINATION

Water for the Lance Creek Water Connection will primarily be supplied by the Lance Creek reservoir, however there will be times when water will be drawn from the Melbourne water supply system. As a result, slight adjustments in the treatment process at the Lance Creek Water Treatment Plant will enable water to be blended and treated effectively.

Chlorine and chloramine (a combination of chlorine and ammonia) are the most commonly used treatment agents and are essential for ensuring customers are never at risk of water-borne illness from drinking tap water.

Very low levels of chlorine or chloramine are maintained in the distribution system to protect the safety and quality of water in storage tanks and pipes.

In preparation for the commissioning of the pipeline, new ammonia and chlorine dosing systems have been installed on the outlet of the Lance Creek Clear Water Storage tank.

CARING FOR AQUARIUMS & PONDS - Chlorine and/or chloramine in the water supply is not harmful to land animals or house plants, but levels may be toxic to fish and should be removed from tap water before use in aquariums or ponds. Some free ammonia may also be present in chloraminated tap water and in fish aquariums as a natural waste product.

It is important to treat tap water to remove chloramines before adding it to your aquarium or pond. Chloramines are generally removed using aquarium water conditioning agents containing a de-chlorinating agent, or by filtration through high-quality granular activated carbon. Local pet shops, vets or aquarium retailers are able to provide further information in regards to a range of treatment options that will make chloraminated tap water safe for aquarium fish.

GIANT GIPPSLAND EARTHWORM COLONY

Recently the project team discovered evidence of Giant Gippsland Earthworms near Korumburra in an area that hadn't previously been identified as a likely habitat.

Prior to the commencement of the Lance Creek Water Connection project, South Gippsland Water, as part of required flora and fauna surveys and assessments, developed plans to minimise impacts on Gippsland Giant Earthworm habitat, including the utilisation of horizontal drilling methods in order to avoid known colonies areas.

The earthworm is listed as threatened under the Victorian *Flora and Fauna Guarantee Act 1988,* and in response to the new discovery work was halted. The project team immediately enacted its environmental contingency plan and experts from DELWP and South Gippsland Shire Council were consulted.

Construction resumed following a site inspection from biologist Dr Beverley Van Praagh who provided advice on how to progress without damaging habitat or earthworms. The project team will continue to work closely with Dr Van Praagh, DELWP and SGSC.

To find out more about Giant Gippsland Earthworms visit http://www.giantearthworm.org.au/index.htm

KORUMBURRA-WARRAGUL ROAD

A reminder to Korumburra residents and those travelling along the Korumburra-Warragul Road, with pipe delivery and earthworks on properties adjacent to the road, there will be an increase in activity with large trucks entering and exiting the construction corridor. South Gippsland Water advises motorists to take care.

Methods of Joining Pipe for a 29km Pipeline

Above: Welding lengths of 502 diameter mild steel cement-lined pipe

Below: Joining sections of polythene pipe (HDPE)

YouTube

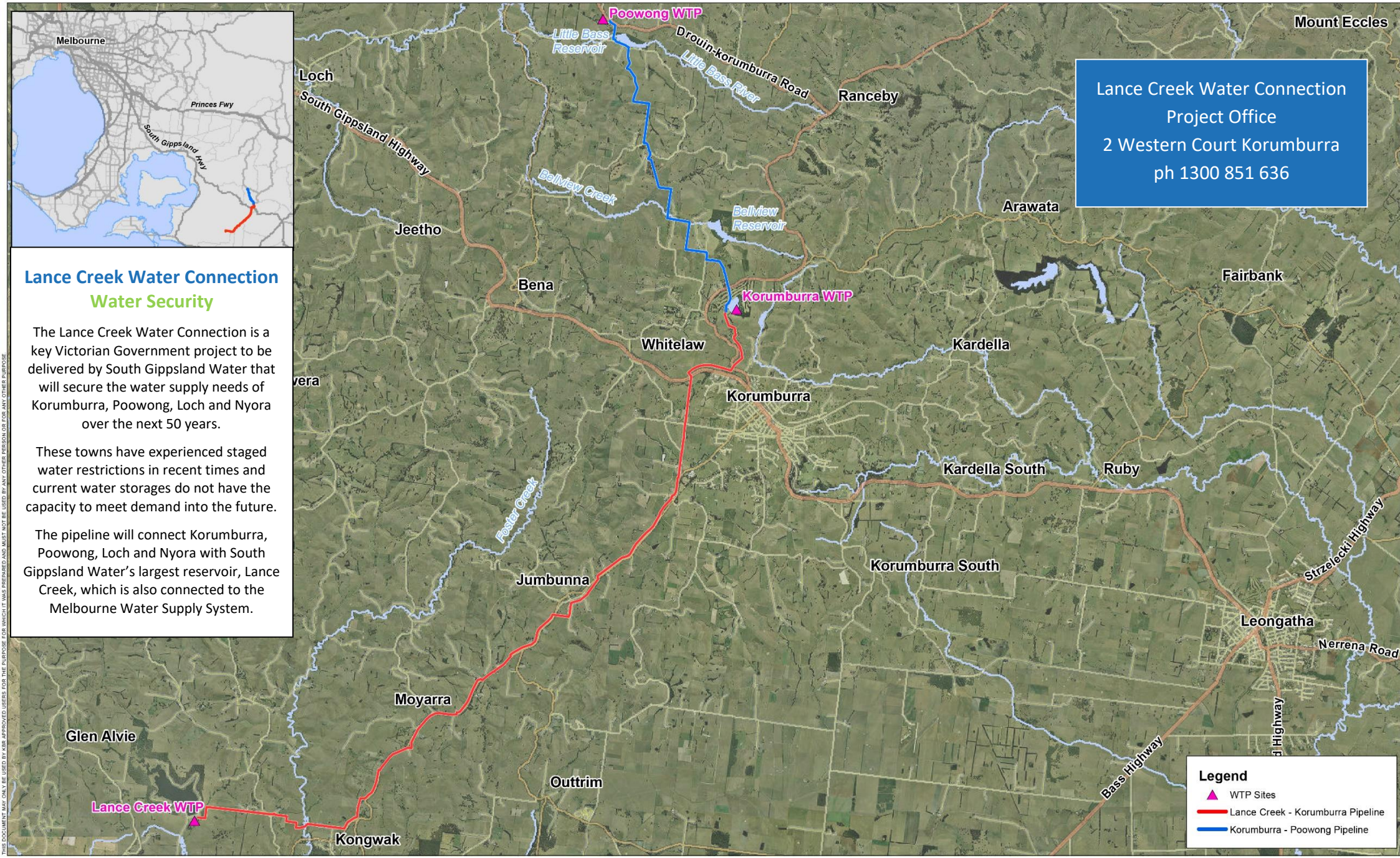
Want a different perspective on the project? Take a bird's-eye view.

http://www.sgwater.com.au/project_page/projects/lance-creek-water-connection/

Lance Creek Water Connection

South Gippsland Water

VICTORIA State Government



Lance Creek Water Connection

Water Security

The Lance Creek Water Connection is a key Victorian Government project to be delivered by South Gippsland Water that will secure the water supply needs of Korumburra, Poowong, Loch and Nyora over the next 50 years.

These towns have experienced staged water restrictions in recent times and current water storages do not have the capacity to meet demand into the future.

The pipeline will connect Korumburra, Poowong, Loch and Nyora with South Gippsland Water's largest reservoir, Lance Creek, which is also connected to the Melbourne Water Supply System.