

COMMUNITY UPDATE

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WELCOME

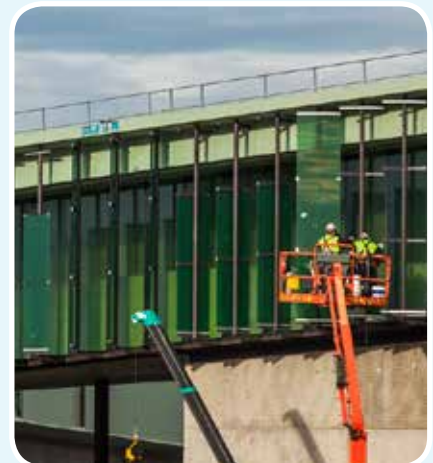
Significant milestones have been achieved since the last edition of the Community Update as the construction of the desalination plant nears completion.

The last seedling was planted on the Reverse Osmosis (RO) building by Bass Coast Shire Mayor, Cr Veronica Dowman. This is a major achievement for the project as it is now clear that the green roof successfully integrates the plant into the landscape.

Inside the RO building workers have commenced installation of the 55,000 RO membranes which is the last stage of construction in this area before commissioning.

Commissioning is well underway across the plant site and is now the main focus. In future editions of the Community Update we will explore the various stages of the commissioning process, and the performance tests that the plant must pass before it can begin commercial operation.

An Environmental Management Plan (EMP) for the operation of the plant is being prepared and will be available on Aquasure's website once it has been finalised and approved by the various parties including the Minister for Environment and Climate Change. The EMP will ensure the plant, utilities corridor and marine structures comply with the environmental performance requirements and applicable environmental legislation.



On the utilities corridor, significant rainfall and the onset of winter have led to the suspension of road and easement reinstatement works until weather conditions improve later in the year. Crews are still in place to undertake tasks such as road rectification, corridor maintenance and some rehabilitation planting works.

The underground power supply connecting the plant to grid power has been energised. This means power is now flowing to the plant site as the 29 buildings are gradually connected to the supply.

We hope you enjoy Edition 9 of the Community Update.


WHAT'S HAPPENING ON SITE

The latest achievements around the plant site

MAIN PLANT SUB-STATION

Underground power enters the main plant sub-station on site at a rate of 220kV, and is then stepped down to a voltage of 22kV via two transformers within the station. The voltage is stepped down even further where required as it is distributed to the different areas across the site.

The underground power supply and all associated assets have now been handed over to SP AusNet to operate.




RO MEMBRANES INSTALLED

Installing the membranes is a significant milestone as this is the final stage of construction before commissioning in this area of the plant can begin.

The membranes are the vital piece of technology that creates freshwater from seawater by separating the salt and water molecules as seawater is pushed through.

If you are interested in finding more information on how we commission the membranes refer to Community Update #8.



DUAL MEDIA PRESSURE FILTERS (DMPFs)

72 DMPFs have been loaded with gravel, sand and anthracite (coal) to complete the layers needed to filter seawater before desalination.




TREATED WATER STORAGE TANKS

Two treated water storage tanks which hold potable water from the desalination plant, are the largest earthwork structures on the project.

Each tank is 150 metres long by 70 metres wide and between the two will hold up to 70 million litres of remineralised water prior to being pumped into the water transfer pipeline.

The tanks are made of a membrane liner and cover to seal and protect the water from the elements and external contaminants.




TRANSFER PUMP STATION

The construction of the transfer pump station at the plant site is now complete. At the pump station, potable water leaves the site and enters the 84km pipeline.

The pump station houses six pumps that weigh 31 tonnes each. Up to five pumps will operate at a time, pumping potable water into the pipeline at a rate of 5,150 litres per second.


When potable water enters the pipeline from the plant site it travels with enough pressure to maintain a steady flow. The booster pump station at Clyde North will help maintain this pressure to keep the water moving on its journey to Cardinia Reservoir.



RO GREEN ROOF COMPLETE

Planting of the green roof on the reverse osmosis building is now complete.


The green roof is the largest of its kind in the southern hemisphere. Visit page 4 for the full story.



WATER STABILISATION PONDS

The construction of the water stabilisation ponds is well underway. The three ponds have been formed and recently lined with a protective clay barrier and a waterproof rubber membrane.

Each pond has the capacity to hold 2 million litres of seawater that has been used in the cleaning process before it is treated and returned to the ocean.



PLANTING COMPLETE ON REVERSE OSMOSIS BUILDING ROOF

Planting of the largest green roof of its kind in the southern hemisphere is complete at Victoria's new desalination plant.

Bass Coast Shire Mayor, Cr Veronica Dowman, was there to plant the last seedling on top of the reverse osmosis building.

"Minimising the visual impact of the desalination plant was one of the key concerns for our local community," she said.

"I am certainly pleased to see the roof thriving the way it is. Plants that were tiny seedlings just a few months ago are now absolutely blooming."

The green roof is an important part of the design, helping to integrate the desalination plant into the landscape and minimising visual impacts on the coastline.

The reverse osmosis building is the biggest of the 29 buildings on the site. Its green roof spans a total area of 26,000m² – bigger than the playing surface of the MCG.

Planting of a second, smaller green roof on the screen and feed building has commenced.

The desalination plant's green roof system will feature over 100,000 indigenous ground covers, tussocks and low growing shrubs. Twenty-five different species have been carefully chosen to suit the coastal climate conditions of the site.



DID YOU KNOW?
The design in the middle of the green roof represents rippling water drops and is constructed using two tone water proofing membrane



COMMUNITY PARTNERSHIPS

Over the past two years, Thiess Degrémont has been an active supporter of the community through its Community Partnerships program.

Over \$400,000 has been invested into the communities that have been directly affected by the project, recognising the importance of investing in the communities in which we work.

The program has recently closed as the construction phase of the project nears completion.

Here's a snap shot of some of the support and partnerships formed over the past two years:



- Over \$120,000 was donated into local sporting and recreational groups for various infrastructure projects, new equipment, local events and educational programs



- Nearly \$95,000 was donated into local kindergartens, pre-schools and schools



- Close to \$50,000 was invested in essential community services, health groups and health awareness fundraising

Complementing the Community Partnerships program, Thiess Degrémont has formed strong relationships with local community groups and businesses vital to the successful delivery of the project.

Westpac Wonthaggi staff and site volunteers helped raise over \$50,000 for the McGrath Foundation by selling pink hard hats.

For two years Westpac Wonthaggi has also provided an onsite advisory service to workers where they could open an account, apply for a home loan or sign up for a credit card without even leaving site.



The Rotary Club of Wonthaggi has worked closely with the project on many occasions. Here, they showcase their cooking skills by preparing a sausage sizzle onsite for 3,500 workers to celebrate the project's second birthday.



Karen Lee, Community Relations Manager, is thanked by Ken Aly, President of the Lions Club of Inverloch and District, for a \$5,000 donation. This money helps the club raise important funds for the You Are My Sunshine (YAMS) Foundation, which increases awareness of Neuroblastoma and funds research to find a cure.

A strong relationship has been formed with the Lions Club of Wonthaggi. Thiess Degrémont has donated funds to the group and assisted in the organisation of their annual convention.



UTILITIES CORRIDOR UPDATE

84km water transfer pipeline

- ✓ Installation complete
- ✓ Hydrotesting complete
- ✓ Fibre optic cable installation complete

87km underground power supply

- ✓ Installation complete
- ✓ Energisation complete
- ✓ Fibre optic cable installation complete
- ✓ Assets handed over to SP AusNet for operation

Power compensation stations

- ✓ Construction complete
- ✓ Energisation complete
- ✓ Assets handed over to SP AusNet for operation

Surge tanks

- Construction complete, earthworks remain at Kilcunda Ridge
- Construction continuing at Gurdies St Helier Road

Booster pump station

- Construction nearing completion

Delivery Points

- Construction nearing completion



POWER SUPPLY ENERGISED

Energisation of the desalination plant's 87km underground power supply has been successfully completed, and power from Victoria's grid is now flowing to the plant site.

This was the final step in power supply construction. Another part of the commissioning jigsaw is now in place.

The power supply to the desalination plant is the longest 220kV high voltage alternating current (HVAC) underground power supply of its kind in the world. It is a major achievement for the team to construct and energise the cable to the requirements of stakeholders and safety regulators.

Over the coming months, construction crews will progressively connect and energise the remaining buildings at the plant site to grid power. This will enable commissioning to start on the many high-pressure pumps in place throughout the plant.



Now the cable is live it has been handed over to SP AusNet for operation.

All of the power used for operation of the plant and pipeline will be offset by renewable energy certificates. This ensures that green energy is fed into the grid to offset the energy used by the project for operation, effectively making its electrical operation carbon neutral.

CONSTRUCTION SURGES AHEAD

Hidden behind a massive retaining wall and artificial hill top, work has been moving ahead on the surge tank located on the Kilcunda Ridge.

The surge tank is designed to protect the 84km transfer pipeline from sudden pressure changes in the pumping system.



A consistent and even flow of water is required as potable water moves along to its final destination, and this is exactly the role surge tanks play.

Construction of the surge tank is complete following installation of the roof and lining of the tank with a specialised high density polyethylene liner material.

Earthworks surrounding the tank are now being finalised with the erection of a 7.6m retaining wall made from keystone blocks that shield the tank from view. Just like at the desalination plant, dunes surrounding the surge tank are being constructed to integrate the facility into the landscape.

A smaller surge tank is being constructed along Gurdies St Helier Road to fulfil the same role.



SEAWATER STARTS FLOWING INTO PUMP STATION



The Victorian Desalination Project has recently celebrated another milestone with the commencement of flow of water through the Seawater Lift Pump Station.

Seawater from the Bass Strait enters the underground pump station via the 1.2km underground intake tunnel.

From the tunnel, the seawater lift pumps transfer the seawater from sea level into the reverse osmosis plant to begin the desalination process.

Testing of the pumps is an important part of the commissioning process. There are 12 pumps each capable of moving up to 1000 litres of water per second. At this stage, seawater is recirculated to the ocean via the permanent intake and outlet tunnels.

The commissioning of these pumps represents a significant achievement for the Thiess Degrémont team of engineers and water treatment experts.

The Victorian Desalination Project Community Update is a quarterly publication designed to keep you informed of the latest project news and progress.

You can download copies of this newsletter from our website or pick up a copy from the Community Information Centre.

CONTACT US

Visit the Victorian Desalination Project Community Information Centre 33–35 Murray St, Wonthaggi
Opening hours: Wednesday–Friday 9.30am–4.30pm



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