

COMMUNITY UPDATE

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WELCOME

The past two editions of this Community Update have looked at the way different components of the project are being tested and commissioned, in preparation for operation.

Crews are now preparing to fill the marine structures and tunnels with seawater, ready for operation, and this edition contains a special feature on how this process will be carried out.

Hydrotesting of the 84km pipeline has also been successfully completed, confirming that the pipeline is ready for commissioning.

Construction of the 87km underground power cable is also complete, with the final stages of energisation imminent.

The fact is, each and every piece of equipment in the desalination plant passes through final quality assurance tests as part of the commissioning process.

More than 200,000 different tests will be carried out on over 28,500 individual pieces of equipment.

Issues can and do come up and identifying and addressing them well before the desalination plant begins operating is exactly what the quality assurance process is for.

With construction nearing completion and commissioning now in full swing, construction crews are scaling down.

Many people have finished their work and moved on to their next project, or are taking a well-earned break.

This trend will continue as commissioning continues.

In the coming editions of this Community Update, we will take a closer look at the treatment processes involved in producing high quality drinking water and the environmental performance requirements in place, particularly with regard to protection of the marine environment and the management of waste products.

Until then, we hope you enjoy edition 8 of the Community Update!

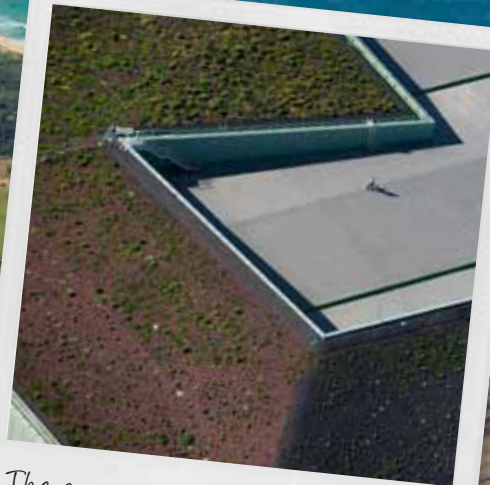


SNAPPED AROUND SITE

Since the last Community Update, much has happened around the project. Here are some of the best pictures snapped in recent weeks.



Workers are finishing off mechanical installations.



The green roof is really taking off!



Water testing laboratories are being fitted out.



Installation of the green roof on the reverse osmosis building is now 88% complete.



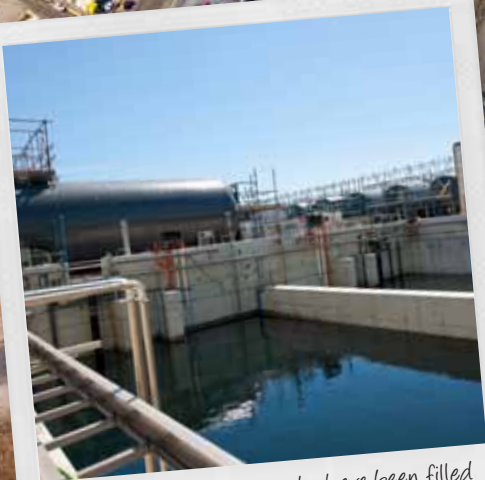
The staff lunchroom is being installed...



Permanent roof covers are being installed at the dual media pressure filters.



Finishing touches on solar-controlled glass installation at the Administration building.



The DMPF backwash tanks have been filled with potable water to check they are leak-proof.



Out on the pipeline, delivery point 3 in Koo Wee Rup is nearing completion.

FILL 'ER UP!

Once a prominent feature on the desalination plant site, the 'box cut' is now all but gone!



December 2010 – the 27-metre deep box cut is a prominent feature on the desalination plant site.

At 27 metres deep and 150 metres wide, the 'box cut' has been a prominent feature on the desalination plant site since late 2010.

The box cut is effectively a deep channel, and was built to provide a launching pad for the tunnel boring machines and a place to build the underground seawater lift pump station.

With tunnelling work complete and the pump station well advanced, the box cut is no longer required.

Earthworks crews are now finalising the backfill of the box cut with some 125,000 cubic metres of earth.

They will then begin construction of three large stabilisation ponds.

The ponds will store water that has been used to clean the reverse osmosis membranes, which will be returned to the ocean after being tested and treated to Environment Protection Authority requirements.



January 2012 – the box cut is all but gone.

RO TO H2O

In the last edition of the Community Update, we discussed commissioning of the dual media pressure filters.

At the same time that the filters are being pre-commissioned, thousands of pieces of equipment and control systems in the reverse osmosis building are also being put through their own extensive series of tests and checks.

The reverse osmosis building is the 'heart' of the desalination plant, where filtered seawater will be pushed through 55,000 membranes to separate salt from water.

Pre-commissioning tests are designed to confirm that the sophisticated control systems, monitoring equipment, energy recovery devices and pumps that support the reverse osmosis membranes have been installed correctly and are ready to operate.

Tests will be carried out both with and without water, to confirm that equipment continues to function as required.

When the commissioning team is confident that all systems and equipment are operating correctly, seawater will be pushed through the reverse osmosis membranes.

Seawater concentrate will be checked and analysed, then returned to the ocean.

Pure water will be potabilised, tested and analysed against the required drinking water standards, then also returned to the ocean.

Put simply, the commissioning team will produce potable water simply to confirm that the membranes and their operating systems are operating correctly.

This is just one part of the broader commissioning process, which will ultimately involve more than 200,000 different tests and take around nine months to complete.

Water produced does not and cannot enter the water network until the commissioning process is complete, and the plant has passed all necessary performance and water quality tests specified in AquaSure's contract and as required by legislation.

In our next edition, we will take a look at the final stages of the commissioning process, and the performance tests that the plant must pass before it can begin commercial operation.

YOUR QUESTIONS ANSWERED

What sort of waste will be generated by the desalination plant?

The desalination plant will generate two main waste streams – liquid waste (known as 'brine') and solid waste.

Brine will be returned to the ocean at the end of the desalination process, while solid waste will be trucked away to an offsite waste facility.

Do you need approval to discharge brine back to the ocean?

Absolutely. Any form of discharge into public waters requires a discharge permit from the Environment Protection Authority.

Where will the solid waste be disposed?

The plant is not yet producing solid waste but when it does, it will be classified by the EPA. The classification of the waste dictates which landfill site it can be disposed at.

Would the solid waste ever be discharged to the ocean?

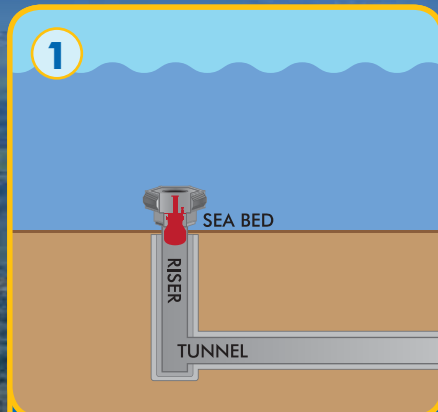
No. This would be a significant violation of EPA guidelines and the environmental performance requirements for the project, and would put AquaSure's license to operate at serious risk.

It is also not physically possible. The solid waste looks and feels like soft clay, and the plant is simply not equipped with the infrastructure required to discharge such material.

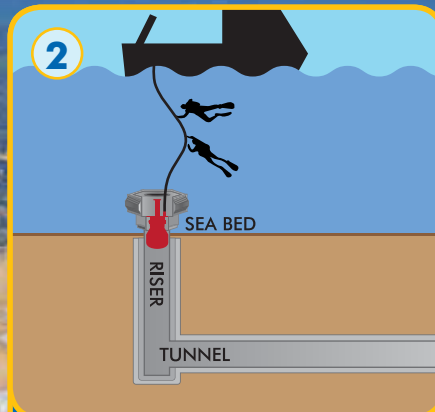


PULLING THE PLUG

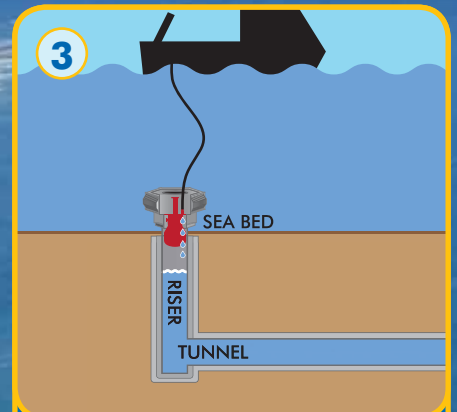
In the last Community Update, we discussed the preparation of the marine structures and tunnels for operation. Let's take a look at how this process will unfold.



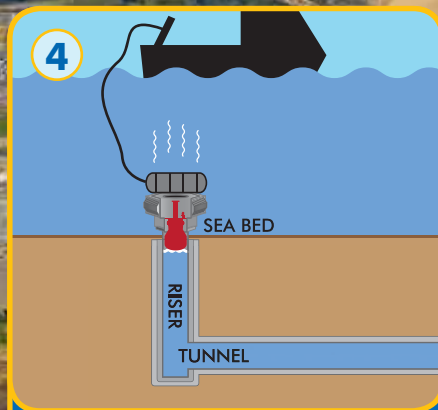
When installed, the marine structures were each fitted with a large plug, preventing the entry of seawater.



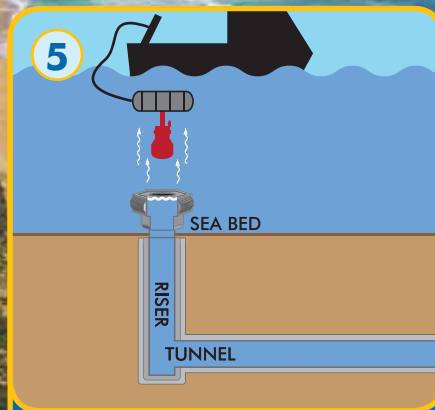
A team of divers will attend the site, accompanied by a boat fitted with a small crane. The dive team will connect a lead to a small valve on the plug.



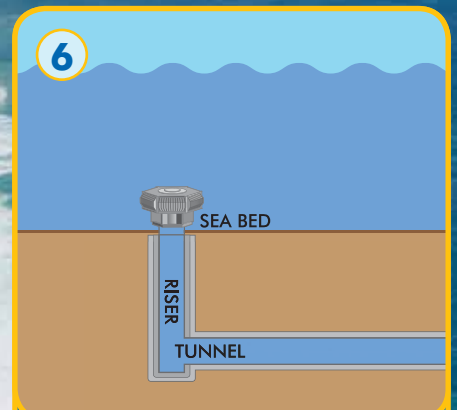
From the boat, the lead will be turned and the valve opened, allowing seawater to flow slowly into the tunnel. It takes around 24 hours to fill each tunnel.



With the tunnel full, a deflated air bag will be lowered into the water and attached to the plug.



The air bag will be inflated, lifting the plug out of its hole. The crane will then lift the plug out of the water.



Finally, steel plates will be installed to seal the structures, ready for operation.

THE JOURNEY SO FAR

Tunnel filling is the final stage of work for marine and tunnelling crews, bringing more than two years of carefully co-ordinated activities to a successful end.

JULY 2010

The first of two tunnel boring machines (TBM) started work on the 1.2km underground intake tunnel. The second TBM started work on the 1.5km outlet tunnel shortly after.



SEPTEMBER 2010

Jack-up barge 'JB 115' arrived from The Netherlands, heralding the start of marine construction work.



DECEMBER 2010

Tunnelling crews completed boring of the intake tunnel, ahead of schedule. Crews completed the outlet tunnel soon after, also ahead of schedule.

FEBRUARY 2011

Marine crews completed installation of two intake and two outlet structures on the seabed. JB 115 left the area for good.



MAY 2011

Tunnelling crews successfully completed the intricate task of connecting with the marine risers.



PIPE AND POWER UPDATE

The transfer pipeline has been successfully hydrotested and the underground power cable will soon be completely 'live.'

Hydrotesting of the 84km transfer pipeline was completed just before Christmas and it is now ready to receive and transport drinking water supplies from the desalination plant.

Hydrotesting was carried out by an independently certified representative from the National Association of Testing Authorities and results verified by the Independent Reviewer and Environmental Auditor for the project.

Construction of the 87km underground power cable is also complete and the final stages of energisation just weeks away, ready to supply power to the desalination plant.

The power cable is supported by a compensation station in Lang Lang, designed to maintain a steady and reliable flow of power to the desalination plant, smoothing out any surges or drops in voltage.

Another facility in Cardinia provides an isolation point and transformer to power the booster pump station.

Just like all high voltage power lines, the desalination plant's underground power supply has been designed



**DIAL BEFORE
YOU DIG**
www.1100.com.au

With the pipeline and underground power cable now in place, it is essential that landowners and members of the community call **Dial Before You Dig on 1100** before undertaking any work in the area.

and built to international and Australian standards to ensure its quality and safety.

Landowners need to observe the conditions placed on the pipeline and power easement in their Memorandum of Common Provisions as part of the DSE land acquisition process, in terms of what they can or cannot do on the easement. It is also essential to phone Dial Before You Dig before undertaking any work in the vicinity of the easement for the pipeline and power cable.

Reminder signs have been installed on every property, providing a clear alert that underground assets are in place and that Dial Before You Dig should be contacted before any works are undertaken.

The compensation station at Lang Lang is nearing completion and will help maintain a steady and reliable flow of power to the desalination plant.



WHO CAN RECEIVE WATER FROM THE **DESAL PLANT**?

The desalination transfer pipeline is fitted with seven delivery points, so that communities right throughout Melbourne, South Gippsland and Westernport can all receive water from the desalination plant if and when they need it.

The pipeline is also 'two-way,' so if the desalination plant is not required, metropolitan pool supply water from Cardinia Reservoir can be sent down the pipeline to supply communities in Westernport and South Gippsland if they require it.

The desalination pipeline direct delivery points will not be open during commissioning.

YOUR QUESTIONS ANSWERED

Does water from the desalination plant need to be mixed with other water sources before we drink it?

No. Water will be ready to drink as soon as it leaves the desalination plant. This is a requirement of AquaSure's contract.

Each of the seven delivery points is equipped with a sophisticated water quality monitoring station, to enable your local water authority, DSE and AquaSure to monitor the quality of the water they are receiving in real-time.

If the water doesn't meet the required standards, it will not be accepted – it's that simple.

DID YOU KNOW?
The first delivery point is right outside the gates of the desalination plant!



REINSTATEMENT UNDERWAY



With pipeline construction now complete, crews are now focused on the reinstatement of landowner properties and local roads.

Under the terms of the project contract, the properties of all 125 landowners directly impacted by pipe and power construction must be reinstated to their pre-construction condition.

Members of the community may have noticed crews at work in various locations, reinstating sub-soil and spreading agricultural treatments and topsoil.

Favourable weather conditions means sowing of pasture has also commenced and will continue through autumn.

Temporary fencing will remain in place until pasture has established, to ensure the pasture is not damaged by farm animals and other external forces.

Work will also soon begin on the permanent reinstatement of local roads that were used as heavy haulage routes during pipeline construction.

Agreement has now been reached with Bass Coast Shire Council on the formal process for this work.

Road maintenance crews will remain available to carry out any necessary temporary repairs until permanent reinstatement is completed.

You can learn more about the process for permanent road reinstatement in Community Update #6.



Favourable weather has allowed pasture sowing to commence.

ONE SMALL WAY TO SAY THANK YOU

Reinstatement of properties includes the removal of the 84km 'haul road,' built by pipeline crews in the early stages of the project.

Construction of a haul road is standard practice on pipeline projects. It basically serves as a temporary construction access road, allowing trucks to deliver goods directly to the point where they are needed.

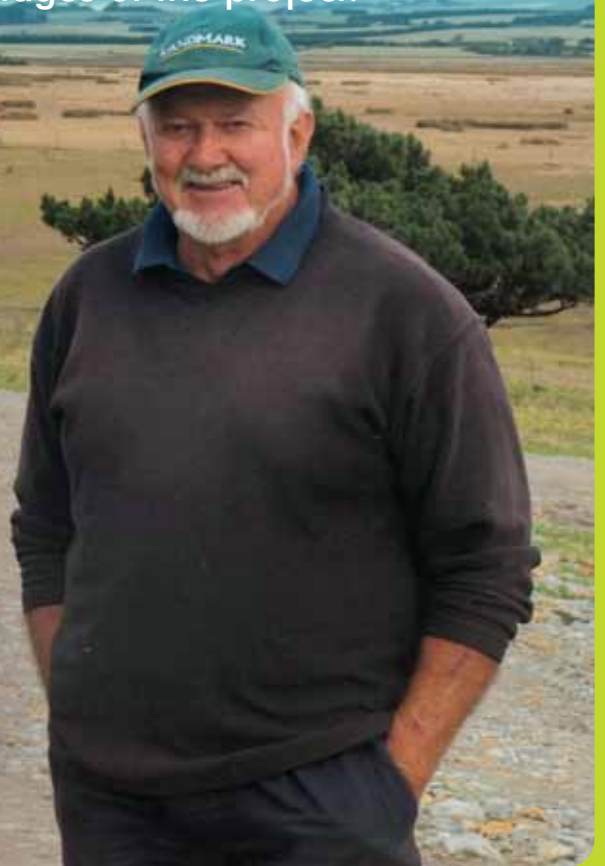
It also minimises the amount of time that trucks and other slow-moving construction vehicles need to spend on public roads, maximizing safety for both local road users and construction crews, and reducing damage to local roads.

While the haul road must be removed from the easement as part of our contract, some landowners have expressed an interest in retaining the removed haul road material for their properties. Kilcunda cattle farmer, Clive Hollins, is one of them.

"I've used the crushed rock from the haul road to upgrade some of the all-weather tracks around my farm," said Clive.

Land liaison officers are happy to accommodate requests for haul road material from landowners with the pipe or powerline running through their properties, subject to all the necessary approvals being obtained.

It's one small way we can say thank you to landowners for their patience and co-operation during construction.



INTRODUCING THE REHABILITATION CONSULTANT

The contract for the Victorian Desalination Project requires an independent Rehabilitation Consultant to be in place.

Prior to construction of the pipeline and power supply commencing, a survey was carried out on all 125 directly impacted properties, detailing their pre-construction condition.

The primary role of the Rehabilitation Consultant is to assess and verify that a property has been reinstated to its pre-construction condition and in accordance with the requirements of AquaSure's contract.

The Rehabilitation Consultant is actually a team of people from Ecology Australia, their expertise ranging from pasture and soils, to environmental science.

Geoff Carr is one member of the team and says it is his role to ensure a quality reinstatement outcome.

"We work very closely with the construction team," said Geoff. "We are constantly monitoring the reinstatement processes they have in place, the work they are doing, the records they are keeping and the standard of their quality control."

"Both the landowners and the contractors want a quality reinstatement outcome in a timely manner and the best way to achieve that is to make sure it's happening from day one."

"Our role is to liaise on rehabilitation between the constructors and the landowners."



YOU'RE A LIFE SAVER!



Thiess Degrémont is proud to support the Venus Bay Surf Life Saving Club through the recent purchase of a custom-built trailer for the transport of safety equipment and surf boards to training and competitions throughout Victoria.

Thiess Degrémont is a proud supporter of the Venus Bay Surf Life Saving Club.

The Club is a member of Life Saving Victoria and provides life saving services to the area of Gippsland coast, between Point Smythe and Arch Rock.

It is also home to a successful 'Nippers' program, designed specifically to teach children between the ages of 5 and 13 the fundamentals of a surf beach and open water safety.

Thiess Degrémont was proud to support the group through the recent purchase of a custom-built trailer for the transport of safety equipment and surf boards to training and competitions throughout Victoria.

Since construction of the Victorian Desalination Project began, Thiess Degrémont has invested more than \$370,000 in local community projects and initiatives.

Check out the Venus Bay Surf Life Saving Club at www.vbslc.org.au

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



FREECALL
1800 811 214



EMAIL
contactus@aquasure.com.au



WEB
www.aquasure.com.au
www.water.vic.gov.au/desalination



POST
AquaSure C/– PO Box 7387
St Kilda Road, Melbourne
VIC 8004