

# GOLD COAST DESALINATION PLANT

BEL

It's known worldwide about shortage of potable water in Australia. That's why it became one of the biggest markets with the greatest demand for desalination plants.

Tugun is a beachside suburb on the Gold Coast in Queensland, Australia, with a population above 5.000 habitants.



Tugun was selected as the preferred site for the proposed plant for a number of reasons. It has the least environmental impact when compared to the other short-listed sites. It has the lowest comparative net present value cost. The site is the only one to which sufficient power can be provided to enable the facility to be operational within the required timeframe. It is aligned with community values and expectations – community consultation conducted late last year highlighted that environmental impacts and cost were the most important issues when considering the location of the proposed plant. It is compatible with surrounding land use, is within close proximity to the ocean and hence requires the shortest intake and outtake pipelines of the three site options and the inlet and outlet pipes cross a minor fault line.

The Gold Coast desalination project is a reverse osmosis, water desalination plant that supplies water to the Gold Coast and South East Queensland via the South East Queensland Water Grid, located in Tugun.

After investigations by the Gold Coast Desalination Alliance, the Gold Coast City Council chose Tugun as the most suitable site for the desalination plant. The cost is expected to be in excess of \$1 billion. The GCD Alliance consists of Veolia Water, John Holland Group, and SureSmart Water, representing the State of Queensland.

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Initial plans were for a \$260 million plant producing 55 megalitres a day. The State Government then contributed \$869 million to increase the output to 125 megalitres a day to share with the rest of southeast Queensland.

There is potential to increase output to 167 megalitres a day, however the plant is currently a reserve site on the Queensland Water Commission's list of possible sites for future desalination plants. Lytton and either Marcoola or Bribie Island are the priority sites.

## DESALINATION PLANT



**Project name:** Gold Coast Desalination  
**Plant Location:** Tugun, Queensland AUSTRALIA  
**Capacity:** 125,000 m<sup>3</sup>/day [33 mgd]  
**Source of Water:** Sea Water  
**Operation Date:** Feb. 2009  
**Technology:** Reverse Osmosis  
**Contractor:** GCD Alliance (Veolia Water, John Holland Group, and SureSmart Water)

BEL, world specialist manufacturer and vendor of composite made Pressure Vessels and other equipment for the water industry.

With more than 40 years of experience in the world of composite materials and winding driven products, BEL is serving the process and water industries holding unique wealth of expertise and skilled resources necessary for design, development and manufacturing of advanced composite products from cutting-edge technologies for the chemical and food industries, waste water treatment and water supply was the selected supplier for the Pressure vessels of this plants with:

- 1.713 Units of High Pressure Vessels model BEL8-S(2x1,5")-1200-8M
- 448 Units of Low Pressure Vessels model BEL8-S(2x2")-450-8M

**Skid Configuration:** Standard Sideports

**Membranes:** Hydranautics

**For more information,**  
**contact BEL by e-mail: [composite@bel-g.com](mailto:composite@bel-g.com)**  
**[www.belvessels.com](http://www.belvessels.com)**