



## Jacking Around the Globe | Part 2

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## HOBAS® GRP for Australia's Largest Ever Pressure Jacking Project

### Sewer Rising Main in Australia's Iconic Gold Coast



Australia's Gold Coast, located about one hour's drive south of Brisbane, expects heavy annual rain falls during their "wet season". This posed problems on the stormwater and sewage systems of the area since the pumping station (PS) B47 wastewater catchment flows are pumped to Elanora Sewage Treatment Plant (STP). With the steady population growth in the area, the treatment plant has reached its capacity and has had some Department of Environment and Heritage Protection (DEHP) license breaches, especially in wet weather flows.

The rationalization of the Elanora and Merrimac catchments to reduce flows to the Elanora STP has consequently been the subject of several internal and external reports and investigations. Instead of upgrading the Elanora Treatment Plant, these planning studies and detailed cost evaluations concluded that the transfer of Elanora's northern hydraulic sewage load to the Merrimac catchment was the preferred strategy. The project, known under the name Burleigh Waters Rising and Gravity Main PS B47, involves the design and construction of 1097 meters D<sub>e</sub> (external diameter) 718 mm HOBAS GRP Pressure Mains PN 10, 428 meter DN 750, DN 960 HOBAS GRP Gravity Mains and upsizing the impellers of the B47 pumps. This diversion is required to cater for projected population growth in the Elanora catchments. After detailed discussions with the design consultant AECOM, the pipeline material had been changed due to various advantages of GRP over ductile iron, including: high corrosion resistance, light weight, and the ability to use trenchless technology such as pipe jacking.

Year of construction

**2013**

Total length

**1,525 m**

Diameter

**D<sub>e</sub> 718, DN 750, DN 960**

Pressure class

**PN 10, PN 1**

Stiffness class

**SN 640000, SN 64000,**

**SN 32000**

Application

**Wastewater**

Installation method

**Pressure pipe jacking,  
Gravity pipe jacking**

Client

**Gold Coast City Council,  
Queensland**

Contractor

**Rob Carr Pty Ltd.**

Advantages

**Jacking pipes for a pres-  
sure pipeline, flexible,  
customized adaption  
of HOBAS Products,  
professional project  
consultancy**

After an initial review by the design consultant, an alternative tender submission which constructs the sewer rising trunk main by tunneling instead of open trench was accepted. The design consultant was convinced of the advantages of HOBAS CC-GRP Pressure Jacking Systems and decided to go ahead and utilize them in the project, making it Australia's largest ever pressure jacking project. In December 2012 the construction contract was awarded to a renowned Australian Tunneling Contractor Rob Carr Pty Ltd. This installation method minimized the construction impact to the local community. Apart from that, the overall cost of the project was reduced due to the number of roads and services that could be left unaffected.

As ductile iron fittings, valves, and dismantling joints were utilized as well, the HOBAS GRP Pressure Jacking Pipe needed to connect to these fittings. Traditionally, HOBAS Flanges are made as per DIN standards; but after detailed discussions with HOBAS Application Engineers, the manufacture of flanges as per Australian standards was arranged - another Australian first.

Thus HOBAS once again proved to "Make things happen"

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