

securing phillip island's water future

Phillip Island's main water supply suspends beneath the San Remo Bridge. What if something happened to the pipeline or the bridge? Westernport Water will soon start work on an under-channel pipeline to secure supply.

Over 3.5 million visitors flock to Phillip Island each year. Its permanent population of 8000 swells to over 50,000 during the summer months and during major events.

Phillip Island's existing water services comprise a 400mm diameter steel pipeline and 375mm hobas pipeline both of which are suspended beneath the San Remo Bridge. The steel main is about 30 years old and the hobas pipeline is 10 years old.

Failure of these pipes or damage to the bridge would effectively and immediately isolate Phillip Island from its drinking water supply source.

Westernport Water has been progressing a project to increase reliability of the water supply infrastructure to Phillip Island. In December 2010 Westernport Water announced that contracts had been awarded to COE Drilling for the design, engineering and construction of an under channel water pipeline between San Remo and Newhaven.

Westernport Water Managing Director, Mr. Jackson indicated "These works were identified as a priority considering the age of existing water mains and critical importance of supply to Phillip Island. Providing an alternative independent drinking water supply main from San Remo to Phillip Island, under the channel using horizontal directional drilling proved to be the most reliable option."

Following consultation with the San Remo Foreshore Committee, Bass Coast Shire Council and Westernport Water's Community Consultative Panel the commencement of works for the under channel pipeline have been scheduled for April 2011 to avoid disruption to visitors and important local events.

COE Drilling Pty Ltd, one of Australia's leaders in engineered and constructed projects by horizontal directional drilling, estimates the project to be completed by the end of July 2011.

How the Project Will Work...

The project will involve installation of 450mm diameter HDPE (PE100) water main from San Remo to Newhaven under the eastern channel of the Westernport Bay. The pipeline will be installed by horizontal directional drilling (HDD) method and the length of the bore will be 864m between the entry and exit points. The pipe will be installed in the bored tunnel which is approximately 10m below the sea bed.

The project activities will be within 200m of the high-water mark and no permanent structures will be sitting above ground. During the construction, entry and exit pits will be excavated on the Newhaven side and San Remo side respectively. On completion, these areas will be backfilled and reinstated to the original condition.

Works on the San Remo side will be limited to a 15 metre x 25 metre area on the public reserve.

The Newhaven site will be on the Council reserve between Old Bridge Road and Phillip Island Tourist Road.

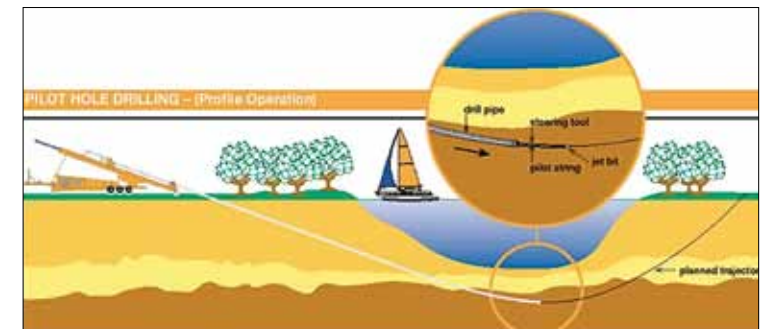
All sites will be fully fenced and secured during the construction and Westernport Water does not anticipate any disruption to the public. Residents around the sites will be fully informed prior to construction commencement.



What is Horizontal Directional Drilling?

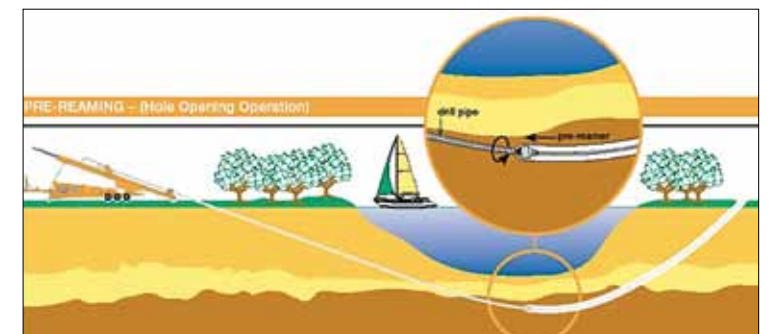
Step 1: Pilot hole

A small diameter pilot hole is drilled under directional control to a predetermined drilling profile using either a jetting bit or a mud motor attached to a drill string. Once the Drill Bit breaks through ground at the HDD Exit the Pilot Hole Operation is complete.



Step 2: Reaming

After completion of the Pilot Hole, the drilled hole is enlarged to suit the product pipe or conduit to be installed. Depending on the geotechnical conditions several passes may be required each progressively enlarging the hole to the required diameter.



Step 3: Pullback

After completion of the Reaming Operations a swivel and barrel reamer are placed in between the Product Pipeline and the drill string. The Drill rig pulling on the drill string pulls the product pipeline or conduit into the borehole.

