

VICTORIAN DESALINATION PROJECT

FACT SHEET

**WATER NOW
AND FOR THE FUTURE.
FOR SURE.**

PIPE JACKING

Construction of the Victorian Desalination Project's transfer pipeline and underground power supply involves a number of road and waterway crossings.

In some locations, a special construction technique known as 'pipe jacking' will be used to install sections of pipeline.

Traditional 'open cut' trenching involves digging a trench, laying pipe and then backfilling the trench.

Pipe jacking does not require a trench. Instead, specialised construction equipment is used to push lengths of pipe through the ground, minimising disruption at the surface.

Where will pipe jacking be used?

Pipe jacking is considered in areas that are environmentally sensitive, difficult to access or where surface activities cannot be disrupted.

It is subject to the approval of the relevant road or waterway manager and, in cases of national environmental significance, the Department of Sustainability, Environment, Water, Population and Communities.

Careful planning is carried out to determine the best construction method for each road and waterway crossing.

How is pipe jacking carried out?

Worksites are established and deep pits or 'shafts' dug on either side of the road or waterway to be crossed. The shafts are lined with sheet piles to create a safe workplace and an underground boring machine lowered in on one side.



Pipe jacking underneath the Bass River near Kernot.

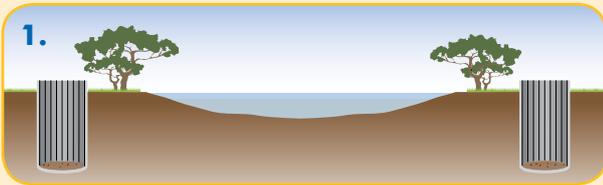
The boring machine excavates the ground while special hydraulic jacks push pipes through the ground behind it. When complete, the shafts are backfilled and then reinstated.

What are the impacts of pipe jacking?

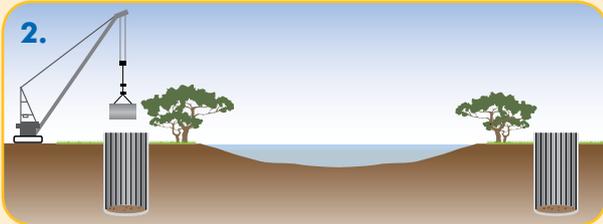
Pipe jacking is a longer and slower process than traditional 'open cut' trenching. While an 'open cut' crossing can be completed in a matter of days, a pipe jack crossing can take many months.

Where pipe jacking is carried out, we work with local residents to minimise disruption. Due to the many stages of work involved in pipe jacking, there may also be more construction traffic on local roads. We ask members of the community to be alert to changed traffic conditions and observe all safety signage in place.

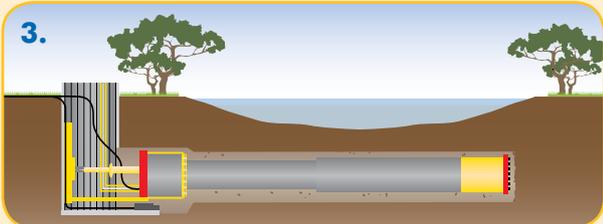
PIPE JACKING – A STEP BY STEP GUIDE



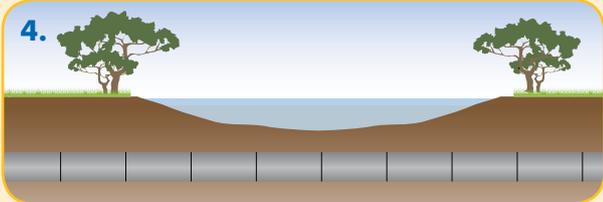
1. A vertical pit or 'shaft' is dug on either side of the road or waterway to be crossed. The walls of the shaft are lined with sheet piles – thin interlocking sheets of steel which are driven into the ground with a vibrating hammer.



2. An underground boring machine is lowered into the shaft and used to excavate a length of ground.



3. Hydraulic jacks then push sections of concrete jacking pipe into place behind the underground boring machine.



4. Steel pipe sections are installed, the shafts are backfilled, sheet piles removed and reinstatement works carried out to return the area to its original condition.



The underground boring machine is lowered into the shaft.



Weighing nearly 40 tonnes, the underground boring machine has a 2.8 metre rotating cutting face which can bore up to 12 metres per day, depending on ground conditions.