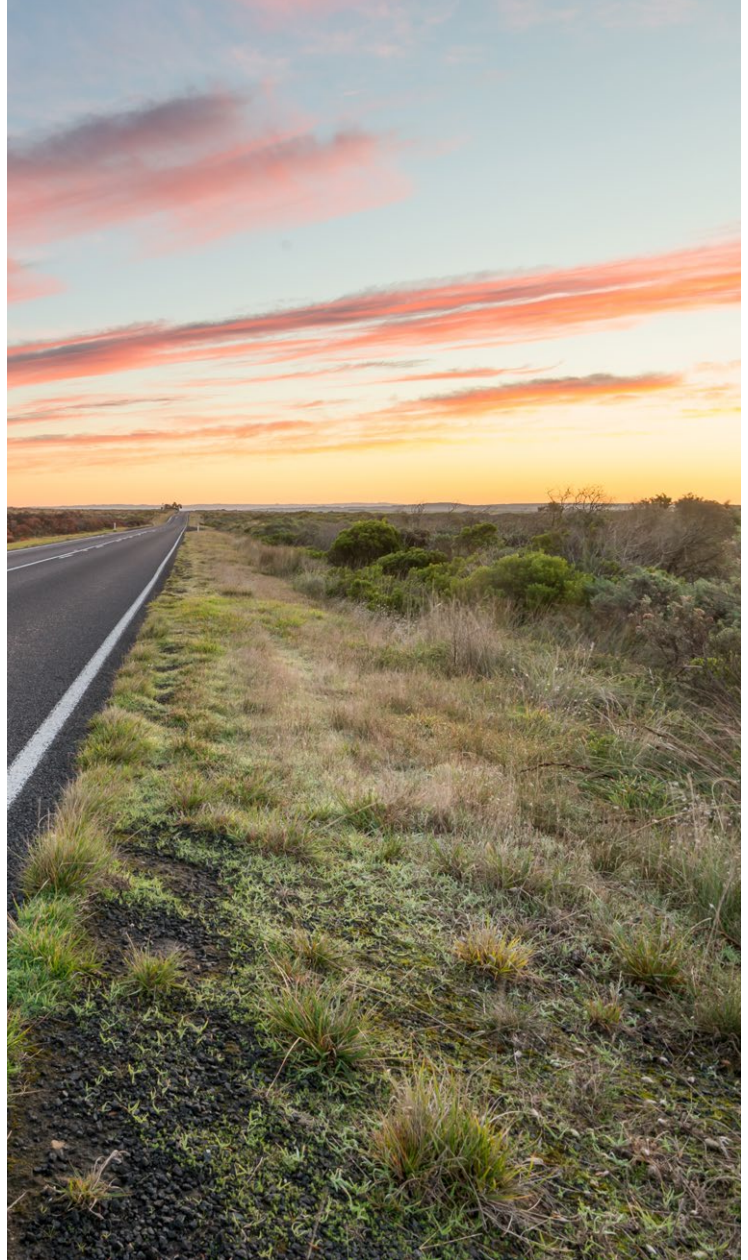




Fact Sheet

Gas Terminal Pipeline Construction



Gas Terminal Pipeline Construction

Viva Energy is a leading Australian company which supplies about a quarter of our country's fuel needs. We have a proven track record in making, importing, blending and delivering fuels, lubricants, solvents and bitumen. We own and operate licensed pipelines in Victoria and across Australia, safely and efficiently delivering fuels to customers. For motorists and truck drivers, we supply Shell and Liberty branded service stations with millions of litres of fuel every year to keep them on the road.

We are a vital part of our country's current and future energy security. The Australian economy relies on the products we supply, our experience in operating supply chains safely and reliably, and our commitment to helping Australian motorists, businesses and industries. In Victoria, our refinery at Geelong manufactures and supplies more than half of the state's fuel needs and has a workforce of more than 700 people.

To support Australia's energy future, in June 2020 we shared our vision to create the Geelong Energy Hub at our refinery. Key to this vision is the plan to develop a gas terminal using a Floating Storage and Regasification Unit (FSRU) and a pipeline to get the gas to market.

The Gas Terminal being adjacent to the Geelong Refinery would leverage our capability as an existing Major Hazard Facility (MHF) operator and offer potential synergies between the two facilities such as the ability to reuse the FSRU seawater discharge in the refinery's existing operations.

The Gas Terminal would bring natural gas from various locations in Australia and overseas, to meet the projected gas shortage in south-east Australia.

More information about Viva Energy's proposed Gas Terminal is in the Project Factsheet on the Project website.

The Project is subject to relevant regulatory and Viva Energy Board approvals.

Gas Terminal Pipeline

A new pipeline, approximately 7km in length and up to 600mm in diameter is proposed to take gas from the FSRU terminal to the existing Victoria Transmission System (VTS).

The pipeline would have two sections:

- An aboveground pipeline approximately 3km in length, connecting the FSRU to the new nitrogen and odorant injection facilities on refinery land; and
- An underground pipeline, approximately 4km in length, which will connect to the VTS at Lara.

It is intended, as far as practicable, to locate this section of the pipeline within, or adjacent to, existing easements or licensed road reserve areas held by Viva Energy within existing pipeline corridors.

The construction methodology for the buried section will involve the use of specialised trenching machines and will take into consideration current land uses. Trenchless construction methods will be used in more complex or environmentally sensitive areas.

Key Facts

600mm

Maximum diameter of the pipeline

~7km

Length of pipeline

60%

Proportion of the pipeline buried underground (above-ground sections will be located on refinery jetty and premises)



Pipeline Construction Summary

Viva Energy will engage with landowners, occupiers and stakeholders prior to and throughout construction of the pipeline.

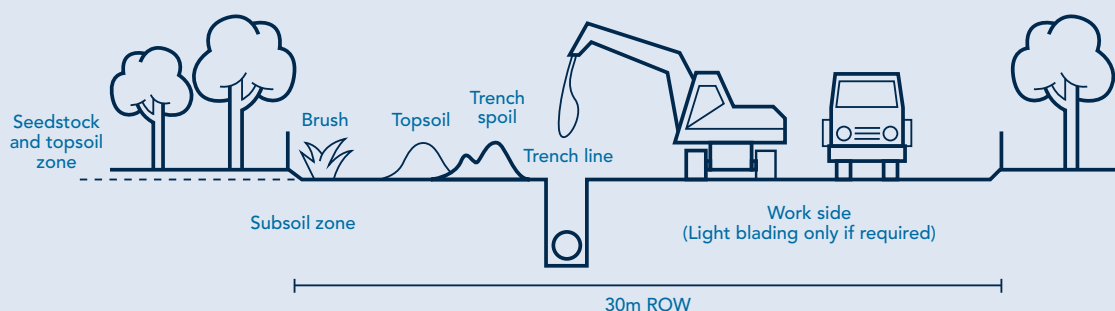
Property management plans may be produced for each property and will identify aspects such as access, amenity, commercial implications and environmentally sensitive areas to be considered during the pipeline's construction and rehabilitation phases.

We will seek to minimise interference with activities on the land both during and after the completion of construction work.

We will rehabilitate any land on or under which a pipeline is situated as far as reasonably practicable to conditions consistent with previous use.

Rehabilitation will commence following the backfilling and compaction of the pipeline trench (buried section).

Construction works are subject to establishing all relevant and necessary agreements with landowners and occupiers.



Pipeline Construction Summary continued

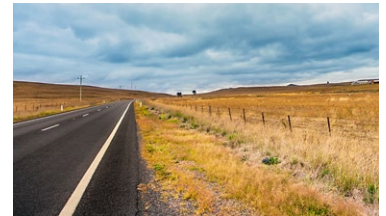
A step by step summary of a typical pipeline construction process is outlined below.



Survey Activities

Field surveys need to be conducted in conjunction with desk top assessments in order to inform pipeline design and development. Survey activities may include cultural heritage, flora/fauna, hydrology, cadastre and soil/land assessments, as well as identification of local features and services.

Land owners and occupiers will be consulted regarding these survey activities and associated requirements for land access. The Notice of Intent to Enter Land for Survey will be provided to relevant landowners and occupiers which will include a description of survey activities.



Construction Activities

Setting up work areas

Before construction can commence, work areas must be set up appropriately. These include lay down areas for equipment, construction material stockpiles and setup areas. Work areas are established through consultation with the community and other stakeholders.

Clear and grade

Clear and grade involves preparing the pipeline easement for construction and setting aside the extra work space as agreed with landowners and occupiers. The combined easement and extra work space is commonly referred to as the construction right-of-way.

Right-of-way

The construction right-of-way is established and will be clearly identified and fenced off where required. Typically, the right-of-way can be between 25-30m in width.

Trenching

A specialised rotary trenching machine or excavator is used to dig the trenches along the pipeline route. Any material removed is placed on the side of the trench (stockpiled), within the construction set up area.

Potential impacts associated with this activity, such as hours of operation, dust and noise management, will be discussed with affected landowners and occupiers prior to commencement of the works.

Trenchless construction

Trenchless construction is used in more complex or environmentally sensitive areas. Specialist operators drill a hole beneath the surface at a shallow angle and then pull a welded length of pipe through the hole without disturbing the surface.

These operations are carefully planned and highly engineered and are undertaken to minimise disturbance to properties and roads in environmentally sensitive areas, or to address construction issues.

Pipe tracks

Pipe tracks will be used to support the above ground sections of the pipeline located on the jetty and within the refinery. Pipe tracks are a series of unconnected low beams designed to support pipes at grade.

Welding

Once the pipe lengths have been laid out or 'strung' along the construction set up area, qualified welders join the lengths of pipes together. Welds are inspected using x-ray or ultrasonic equipment to ensure their quality and are then coated to reduce the likelihood of corrosion.

Lowering in

After final quality assurance checks, each completed pipe section is lowered into the trench using specialist side-boom tractors and excavators.

Backfill (buried section only)

When the buried section of the pipe is in place, trenches are backfilled with suitable material (padding) to protect the pipeline coating from stones or other sharp objects. The topsoil is then re-instated over the disturbed trench area to the contour of the land so that pasture or other groundcover can be rehabilitated.

Quality assurance

Rigorous quality assurance, inspection and testing occurs during and after the installation to confirm that the pipeline integrity meets or exceeds the design criteria. Using water, the pipe is pressure tested (hydrotested) to ensure it is fit for operational service.

Pipeline Operation and Land Rehabilitation

Commissioning and operation

Prior to commissioning and operation of the pipeline, consent is required from the Minister administering the *Pipelines Act 2005* and as relevant, ESV. The pipeline must comply with the requirements of the *Pipelines Act 2005* and *Pipelines Regulations 2017* and the Environmental Management Plan and Safety Management Plan must be approved by the Minister administering the *Pipelines Act 2005* and Energy Safe Victoria respectively.

Easement and property rehabilitation

Disturbed land will be reinstated as far as practicable to its previous state and use and this may include re-contouring to match existing landforms. Topsoil conserved during the construction process is re-spread over areas used for construction. Rehabilitation is undertaken in accordance with previously agreed property management plans and in line with established industry practice/standards.

Signs are placed at regular intervals and within line-of-sight to one another to indicate the presence of a buried pipeline.



If you have any questions about the proposed pipeline or the Project, please contact Viva Energy's Project Team

1800 515 093
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www.vivaenergy.com.au/energy-hub

Alternate sources of information

Department of Environment, Land, Water, and Planning
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Energy Safe Victoria
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