Information on how
Pipeline Construction & Operation
might impact upon the Landowner

Naracoorte Lateral

Prepared for SEA Gas

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(In accordance with Regulation 22, SA Petroleum Regulations 2000)
Introduction

The SEA Gas pipeline is a major interstate gas pipeline which supplies gas to the Adelaide power generation and retail markets. This pipeline delivers many benefits to the South Australian community, including more secure and reliable gas and electricity supplies and satisfying the demands of new industry that may be established in the State. A small lateral pipeline is proposed to be constructed from the SEA Gas Pipeline to the Teys Bros abattoir. This pipeline will provide a secure and cheaper energy source to help to ensure the future of the plant.

Sea Gas has prepared this booklet to ensure that landowners along the route of the proposed lateral are aware of their rights under the South Australian legislation. The booklet’s other objectives are to advise landowners of the nature and likely impact of the construction work that will be performed and the ongoing considerations of having an operating gas pipeline on their land. This information is provided in addition to the detailed information contained within the SEA Gas Environmental Impact Report and Statement of Environmental Objectives required for the Project. These documents may be viewed on the Environmental Register, PIRSA Petroleum Group website (www.petroleum.pir.sa.gov.au) or may be obtained from PIRSA Petroleum or SEA Gas (contact details are given at the rear of this booklet)

Natural Gas Pipeline Construction

Preliminary Survey

Under SA legislation, any pipeline proponent is required to seek a Preliminary Survey Licence to conduct surveys to establish likely routes, and to perform initial geotechnical, ecological and heritage surveys to confirm the suitability of the pipeline alignment. SEA Gas has applied for a Preliminary Survey Licence and plans to commence this stage shortly. At the end of this stage the pipeline route will be finalised and it is in your interests that you inform SEA Gas of any concerns you may have regarding the pipe being located on your land, so that these may be considered when determining the pipeline route. It is proposed to align the pipeline easement along boundary fence lines to minimise the impact on your land. You will be compensated for any loss or damage that you may suffer in this regard and this detail is set later in this brochure under the heading of “Compensation”

Possible impacts at this stage will be very minimal, and may require vehicle washdowns to prevent the spread of any weed and/or disease issues between adjacent landholdings. You should advise SEA Gas of any concerns in this area.
As provided for in Part 10 of the Act, SEA Gas will give 21 days notice of its intention to enter your land and you have the right to object. In this case the Minister may attempt to mediate or the matter may be referred to the Warden’s court.

**Easements**

Prior to any construction works commencing, SEA Gas will obtain an amendment to its existing Pipeline Licence. This can be obtained after submission and acceptance of the appropriate Environmental Impact Report. Once the amendment has been issued, the SA *Petroleum Act 2000* states that the licensee must proceed to acquire an easement reasonably required for constructing and subsequently operating the pipeline.

Initially, SEA Gas will offer you an "Option to Enter Easement", which is an agreement by you to grant an Easement to SEA Gas in the future based on the terms and conditions set out in the Option document. If the various approvals and licences are not obtained by SEA Gas then SEA Gas will not take up the Option, thus terminating the agreement.

In considering an "Option to Enter Easement", SEA Gas wishes you to be aware of the possible impacts that may be caused by pipeline construction and its subsequent operation. Information is provided to assist you to become fully aware of the activities and how any consequences of those activities will be managed to minimise any disruption to, or impact on, your own activities and enjoyment of your land.

This booklet has been produced to provide this information to you, in accordance with the requirements of the Petroleum Act, 2000.

SEA Gas will discuss with you and address any concerns that you may have regarding the proposed activities on your land in order to reach a mutually acceptable agreement. Should we be unable to reach agreement between ourselves we may ask the State Government regulatory agency (PIRSA) to intervene and mediate impartially. In the unlikely case that we cannot reach a mutual agreement the matter may be resolved in the Warden’s Court.

A map showing the general route of the proposed pipeline is shown in Attachment 1. Prior to construction commencing on your land, SEA Gas will provide you with more detailed information and a time frame for construction works on your land.

**Construction Activity Impacts**

Gas pipeline construction and operation activities now follow well established procedures that are in practice world-wide and, with continuous improvement, have proven to be safe and environmentally responsible.
The proposed Teys Bros pipeline project will be constructed and operated in accordance with the requirements of appropriate Australian Standards, the Australian Pipeline Industry Association (APIA) Code of Environmental Practice and the South Australian Petroleum Act and Regulations 2000. Each of these documents seeks to create an environment of ‘best practice’ operations and requires that pipeline companies perform their activities within a framework of responsibility for the environment, public safety and interaction with landowners. Australian Standard AS 2885 requires that the pipeline be buried to a minimum depth of 750 mm.

SEA Gas would like to emphasise that impacts on the landowner are short term and, once the easement has been restored, the operating pipeline will have little impact on you and your land.

It is anticipated that the construction workforce will not exceed twelve personnel on site at any time.

1. Construction Survey

Prior to construction work commencing, a survey will be conducted to determine the required location of the pipeline in the easement. This will be pegged with offset markers.

2. Fence Cutting and Access Gates

Any fences across the easement will be cut and replaced by opening panels to allow access for construction equipment and vehicles. Temporary electric fences will be installed if necessary. Procedures will be put in place to ensure that these panels are kept closed except for when equipment or vehicles are passing through.

3. Access

Access will generally be via existing roads and tracks as well as the construction right-of-way. It is expected that no new access track will be needed. Existing roads and tracks will be used and all Project related movements will be restricted to the easement width and access tracks that you approve.

Access planning will include consultation with you, the landholder, and regulatory authorities. Any damage to existing access tracks will be rehabilitated to the original condition in accordance with your requirements.

The easement will be 15 metres wide to allow for construction of the pipeline as well as to provide a safety buffer zone to ensure that any activity carried out on the Easement Land is in accordance with the Grant of Easement documentation. These activities are set out in the “Use of Easement by Landowners” section of this brochure.
4. Clear-and-Grade

Clear-and-grade activities primarily involve the preparation of a safe construction right-of-way for vehicular movement, trenching and other construction activities. The process specifically involves:

- clearing minor vegetation and other obstacles from the right-of-way
- grading topsoil to the edge of the right-of-way, and
- creating a safe working surface (and slope) for construction.

Vegetation clearing is kept to the minimum practicable and overhanging branches are trimmed rather than removing trees where it is safe to do so. Specialist personnel will flag vegetation that is to be avoided. Landholders will have the opportunity to harvest crops (if appropriate) prior to construction. Any cleared vegetation will be stockpiled separately from topsoil and trench soil and respread during restoration.

Topsoil will be graded to a depth of 10 to 15 cm for a width of 9 to 15 metres depending on factors such as the soil type, terrain, construction requirements and weather conditions. The topsoil will be moved to the edge of the right-of-way (refer to above illustration). This is done to protect the topsoil from being mixed with sub-soil. Topsoil is essential for successful restoration.

The right-of-way is required to have minimal side-slope to provide a safe work area. As such, in some areas it may be necessary to cut and bench the right-of-way to create a sufficiently level
work area. Excess soil will be appropriately stockpiled for reinstatement of the original surface contours.

During this phase your access on or across the easement may be restricted. The clear and grade activities are expected to take place 1 to 3 days prior to the excavation of the trench, but this may change depending on equipment availability, weather, etc.

5. Trenching

The trench will be dug using excavators, back-hoes or trenching machine, as shown in the illustration below.

Typical Trenching Machine

The trench will be sufficiently deep to provide the required depths of cover. This is at least 750 mm but will be greater where required by design or land use considerations. The trenching rate is expected to be approximately 200 m per day, or more if a trenching machine is used.
Trenches will be left open for the minimum time practicable (possibly 1 to 2 weeks). This is a balance between the need to have sufficient trench open to allow efficient progress of welding and lowering in crews whilst not unduly affecting landowners, stock or wildlife. It is expected that the full length of the trench will be open for a short period of time. Again, access on or across the easement may be restricted. Appropriate means to facilitate personnel, stock and wildlife crossing and escape will be installed.

Trench spoil will be placed separately from topsoil on the easement for subsequent return during backfill.

The time from trenching to pipe laying and backfilling is expected to be less than 7 days.

6. Pipe Delivery and Welding

The pipe will be transported directly to the construction area and laid adjacent to the trench (in the pipe preparation area) on bags of sawdust to protect the pipe coating from damage. Pipe ends will be capped to prevent wildlife and foreign material from entering the pipe prior to welding.

Stringing the Pipe

A specialised welding crew will then butt-weld the pipes together. Each weld will be x-rayed to check for flaws and then coated to protect it from corrosion.
Typical Welding Crew for a Small Diameter Pipeline

Welded Pipe Ready for Lowering-in
7. Horizontal Directional Drill

In places where the pipeline must pass underneath existing infrastructure that cannot or should not be disturbed (e.g. a railway line or sealed road) a hole will be drilled underneath the obstacle and the pre-welded pipe pulled through it. A typical small horizontal directional drill rig is shown in the photo below.

![Small Horizontal Directional Drill Rig](image_url)

8. Lowering-In and Backfill

The welded pipeline will be lowered into the trench using side-boom tractors, excavators or similar. Prior to lowering-in it may be necessary to de-water the trench if rainwater or groundwater has accumulated in it.
Impermeable trench blocks (otherwise known as trench or sack breakers) may be installed prior to backfilling of the trench to control water movement along the backfilled trench. These are generally installed adjacent to watercourses, on steep slopes or where drainage patterns change, and so are unlikely to be required for this pipeline.

Trench spoil will be subsequently returned to the trench in the appropriate order (to avoid soil inversion) and compacted.

Lowering-in

In rocky areas it may be necessary to place a layer of rock-free material in the base of the trench. This material (known as padding) may be sifted trench spoil or imported sand, sourced from existing authorised borrow pits.

Shading is similar to padding material but is added after the pipe has been lowered into the trench and protects the sides and top of the pipe from abrasion. Excess rocky material will be transported off your land for disposal, or you may request that it be transported elsewhere on your land for your own use.

9. Testing

The pipeline will be pressure-tested prior to filling with gas by filling it with water and pressurising it for about one day. A corrosion inhibiting chemical is likely to be added to the hydrotest water. This chemical removes dissolved oxygen from the water and is considered harmless to the environment.
Regulations prohibit SEA Gas from discharging the water to natural water bodies. If appropriate, the water may be supplied for beneficial use on your land but only in consultation with you and with your approval. The water will be sprayed into the air to re-oxygenate it. Otherwise, the water will be removed and disposed at an appropriate site off your land.

10. Cleanup and Restoration

Pipeline construction generates very little waste. The waste that is generated usually includes pipe offcuts, rope spacers and timber skids, which are generally recycled. All waste materials will be removed from the work area and disposed of appropriately.

As soon as practical after backfill, the easement will be re-instated and restored. Rehabilitation is tailored to site-specific conditions.

![Reinstated Easement](image)

Generally, the landscape will be rehabilitated to pre-existing contours and natural drainage lines restored and protected (if required). To promote vegetation regrowth and protect against the loss of topsoil, the right-of-way surface will be lightly scarified prior to respreading the topsoil. Typically, the easement will be reseeded or revegetated as agreed with you prior to construction.

Sedimentation and erosion controls will be constructed if necessary to protect the restored easement from excessive surface run-off and/or prevent ponding of water on the easement.
The time between clear and grade and clean up and restoration is not expected to exceed 6 to 8 weeks.

11. Fence Reinstatement

The access panels in fences will be removed and the fence reinstated.

Operation

Easement Access

Once construction has finished, most normal farming activities may be resumed over the easement. Access, however, will be required by SEA Gas at regular intervals for operating and inspection purposes for the life of the pipeline.

Pipeline Safety

Pipeline operating conditions are remotely monitored from the SEA Gas Control Centre in Adelaide, and generally will not involve any impact on you or your land.

Gas pipelines operated in Australia are very safe and few significant leaks have occurred in thirty-five years of operation. The most likely cause of a significant pipeline leak is excavation activities by parties who are unaware of the buried pipeline’s exact location. The pipeline route will be well marked by warning signs, as required by the Australian standard but these will usually be located on fence lines. You, as a landowner, will need to remain aware of the pipeline location on your property, and prevent your subcontractors from undertaking some activities in the vicinity of the pipeline until the pipeline has been located exactly.

SEA Gas will undertake regular inspections of the pipeline easement by both land and air. Such inspections will identify any areas of erosion, increased weed infestation, trench subsidence or third party activity on the easement. Access to your land will be necessary to follow-up issues identified from such inspections. Low impact access for maintenance of erosion, subsidence and weeds is likely to be necessary, particularly during the first 12 months after construction. You will normally be notified and consulted prior to entry on to your land for maintenance purposes.

Very rarely more significant maintenance activities, such as excavating sections of the pipeline, may be necessary.
Use of Easement Land by Landowners

SEA Gas easement Officers will maintain regular contact with you to ensure both you and SEA Gas are appropriately aware of all easement management issues.

Normal farming activities may be resumed over the pipeline easement.

However digging and similar activities on or around the pipeline within the 15 metre wide easement should only be undertaken after first seeking advice and agreement from SEA Gas, and, if necessary, SEA Gas personnel have positively located and marked the position of the pipeline. These activities include:

- Boring water wells,
- Digging post holes,
- Planting grape vines,
- Planting or cultivating trees,
- Digging of any excavation, carrying out any earthworks or constructing anything that alters the contours of the land (eg dam construction, grading etc),
- Constructing buildings or any other permanent structure,
- Ploughing to a depth greater than 450 mm, or
- Any activity which may restrict vehicle access to the pipeline.

However, within 5 metres of the pipeline the following activities may not be carried out under any circumstances:

- Boring water wells,
- Planting or cultivation of trees, or
- Construction of dams, buildings or any other permanent structures,

In addition, explosives may not be used within 500 metres of the pipeline.

Compensation

Compensation will be offered in accordance with your rights under the *SA Petroleum Act, 2000*. This will cover

(i) Temporary deprivation or impairment of the use and enjoyment of your land during construction and any future maintenance activities; and

(ii) Permanent damage to your land (not including damage that will be made good by SEA Gas); and
(iii) Damage to, or disturbance of, your business or other activity lawfully conducted on the land during construction and future operation of the pipeline; and

(iv) Consequential loss.

Your compensation rights are such that you should be in the same position as you were prior to the Grant of Easement and construction of the pipeline through your property.

A dispute relating to the amount or terms of the compensation may not be used as a basis for objecting to entry to the land. Any disputes over the amount or terms of compensation offered may be referred to the Warden's Court (for claims of less than $100,000) or to the Land and Valuation Court.

Contacts

If you have any concerns about the manner in which SEA Gas or its contractors conduct their activities on your land, you are encouraged to contact your SEA Gas liaison person in the first instance. As these activities are conducted under the SA Petroleum Act, 2000, which is administered by PIRSA Petroleum you may contact them at anytime if you have concerns or issues or require further information.

Advice on undertaking restricted activities in vicinity of pipeline:

"Dial before you dig" Phone 1100

SEA Gas Property Liaison

Provided by Maloney Field Services, contact details already provided to you.

SEA Gas

SEA Gas Pty Ltd
GPO Box 2666		Phone	08 8236 6800
ADELAIDE 5001 Facsimile 08 8236 6899

Ms Anne Cross Phone (Office) 08 8236 6816
(Land Liaison Officer) (Mobile) 0439 755 580

Mr Patrick Pulis Phone (Office) 08 8236 6808
(Environment, Risk and Land Management Coordinator) (Mobile) 0418 850 156

State Government Regulatory Agency

Petroleum Group, Primary Industries and Resources, SA
GPO Box 1671 Phone 08 8463 3201
ADELAIDE 5001 Facsimile 08 8463 3229

Mr John Morton Phone (Office) 08 8463 3225
(Manager – Geological Regulation) (Mobile) 0401 122 023
Attachment 1 – Route Map