

Viva Energy Gas Terminal Project

Environment Effects Statement
Summary Document

Acknowledgement of Country

Viva Energy acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of this nation and the continuation of cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples. We particularly pay respects to the Traditional Custodians of the land, on which we conduct business here in Geelong, The Wadawurrung peoples of the Kulin Nation.

We also acknowledge our gratitude that we share this land today, our sorrow for the costs of that sharing and our hope and belief that we can move to a place of equity, justice and partnership together.

This document provides an overview of the Viva Energy Gas Terminal Project Environment Effects Statement (EES).

This document provides a non-technical summary of the project, the EES process and how to navigate the EES. It also includes information on the public exhibition process and how interested parties can make a written submission on the EES. For detailed technical information on the project and to understand matters of interest, please refer to the EES chapters and technical reports before making a submission.



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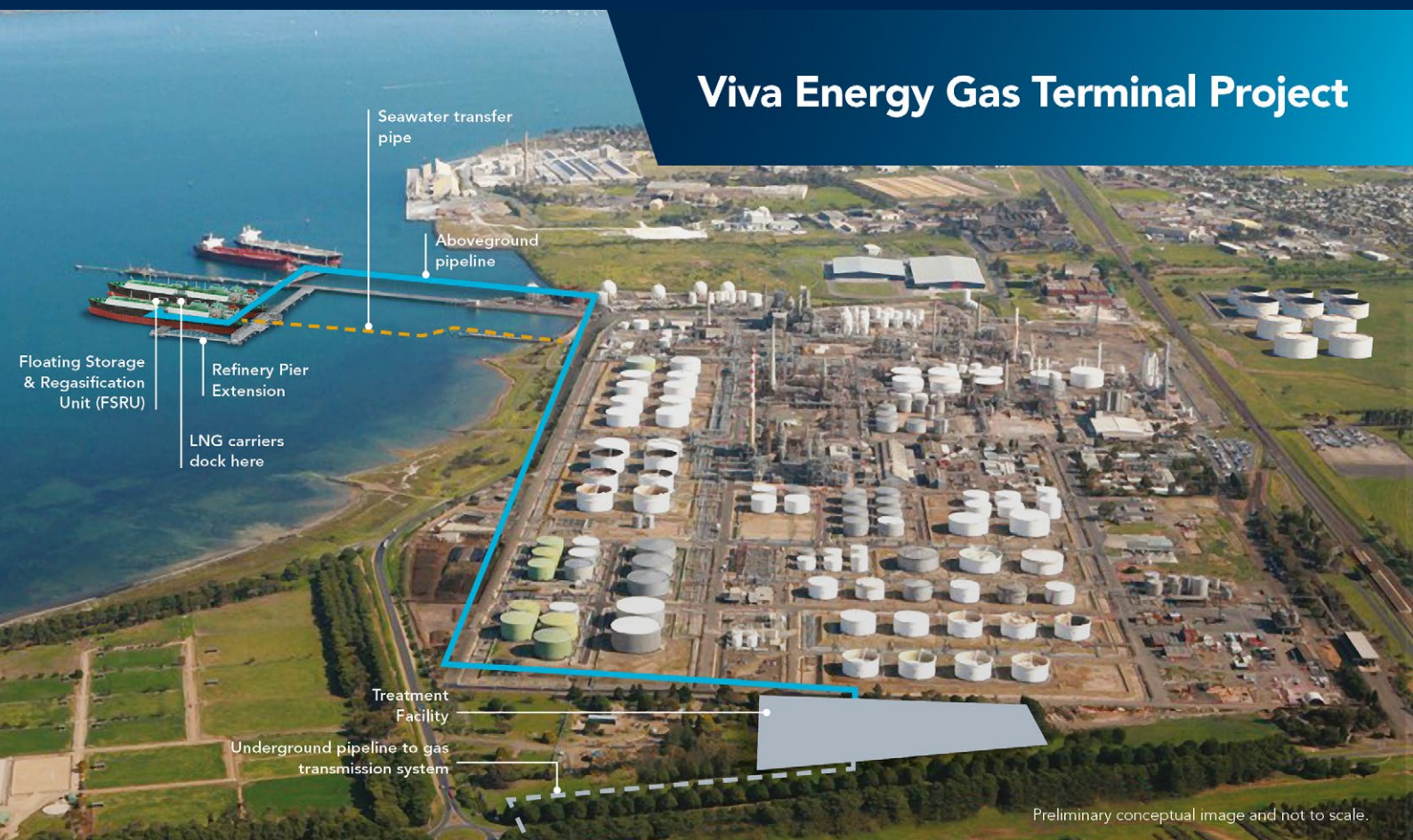
The Viva Energy Gas Terminal Project

Viva Energy Gas Australia Pty Ltd (Viva Energy) is planning to develop a floating gas terminal using a ship known as a floating storage and regasification unit (FSRU) at Refinery Pier in Corio Bay, adjacent to Viva Energy's Geelong Refinery.

The Viva Energy Gas Terminal Project (the project) would bring natural gas from other parts of the country and overseas to meet the anticipated gas shortage in south-eastern Australia. An FSRU provides a cost-effective and flexible option for short and long-term energy supply. The project is anticipated to operate for approximately 20 years.

The project comprises the following components:

- **Extension of the existing Refinery Pier** – a new pier arm, new berth and ancillary pier infrastructure
- **The FSRU** continuously moored at the new Refinery Pier berth, which would receive liquefied natural gas (LNG) from visiting LNG carriers, store and convert the LNG into natural gas when needed
- **A treatment facility** located within the Geelong Refinery site to check that the gas meets transmission network standards, where odorant and nitrogen (when required) is added.
- **A pipeline** to transfer the gas from the FSRU to the South West Pipeline (SWP) connection point at Lara, comprising a 3-kilometre aboveground section and a 4-kilometre underground section.



Viva Energy Gas Terminal Project



1.1 About Viva Energy

Viva Energy is one of Australia's leading energy companies with more than 110 years of operations in Australia and supplies approximately a quarter of the country's liquid fuel requirements.

Viva Energy is the exclusive supplier of Shell fuels and lubricants in Australia through an extensive network of more than 1,300 service stations across the country. Viva Energy owns and operates the strategically located Geelong Refinery, and operates bulk fuels, aviation, bitumen, marine, chemicals and lubricants businesses supported by 24 fuel import terminals, 22 depots and 55 airports and airfields.

The Geelong Refinery is Viva Energy's largest operation, employing more than 700 people. The refinery and associated operations have been part of the local Geelong community since 1954 and supplies more than half of Victoria's fuel needs and injects more than \$200 million each year into the local economy through wages and services.

1.2 Project background

In June 2020, Viva Energy announced its vision to transform its Geelong Refinery into an Energy Hub. The Geelong Energy Hub would support the company's energy transition currently underway while helping to underpin the future viability of the refinery site.

The Geelong Energy Hub vision is to deliver long-term energy security by taking a leading role in supplying liquid fuels and gas as well as supporting the development of other alternative energy solutions.

Importantly, diversification of the Geelong Refinery site would protect local jobs, generate new jobs and skills and support economic development for the region. Over the 18-month construction period the project would provide 150 to 200 jobs, and 50 to 70 ongoing jobs once the terminal is in full operation.

The Gas Terminal Project is the first project related to the Geelong Energy Hub to be developed.

1.2.1 Project setting and benefits

The Geelong Refinery supplies approximately half of Victoria's liquid fuel energy needs, facilitating the import and export of bulk liquid fuels with over 200 shipping movements per year through the Port of Geelong shipping channel. Having been part of the Geelong community since 1954, the Geelong Refinery has a long history of co-existing with its neighbours and investing in the local community, which will continue as it transforms into the Geelong Energy Hub.

The Geelong Refinery and Port of Geelong provides an ideal setting for the project, with close access to Victoria's gas transmission network and major gas demand centres. This location also offers significant opportunity to minimise potential environmental effects and utilise the attributes of the industrialised port and refinery setting.

A key environmental benefit of co-location of the project with the refinery is the proposed reuse of seawater used for the FSRU in the refinery's cooling water system. This reuse would result in no change to the total volume of seawater extracted from Corio Bay, no change to the volume of water discharged from the refinery, no change in residual chlorine levels and an improvement in the temperature of the discharge compared to the existing refinery discharge.

The co-location of the project with the Geelong Refinery and use of existing disturbed pipeline corridors where possible means the project would have minimal impact on native vegetation. Being close to Victoria's gas transmission network means only a short gas transmission pipeline (approximately 7 kilometres) is required. Of this, approximately 3 kilometres are on the pier or within the refinery, resulting in few impacts to landholders.

1.3 Project need

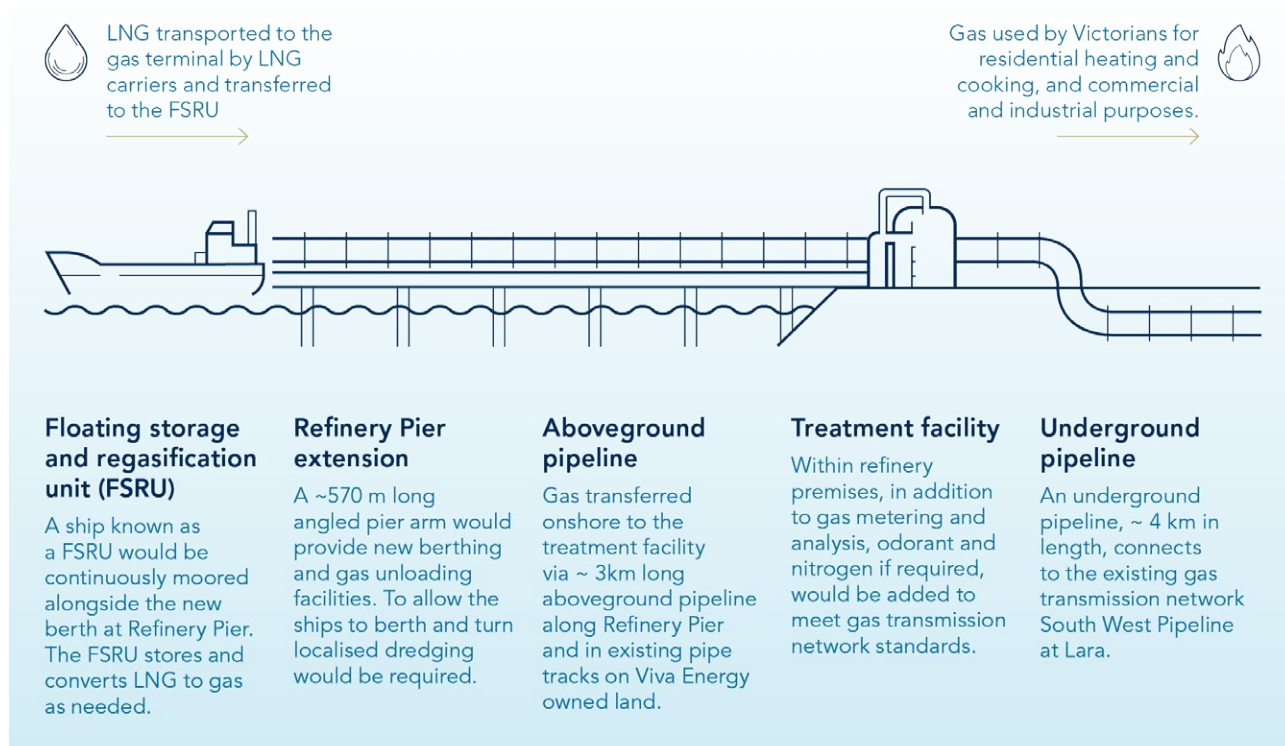
Natural gas is an essential source of energy for Victoria, meeting around 22% of Victoria's total energy needs. There are over 2 million gas connections in Victoria for heating, cooking and industrial uses.

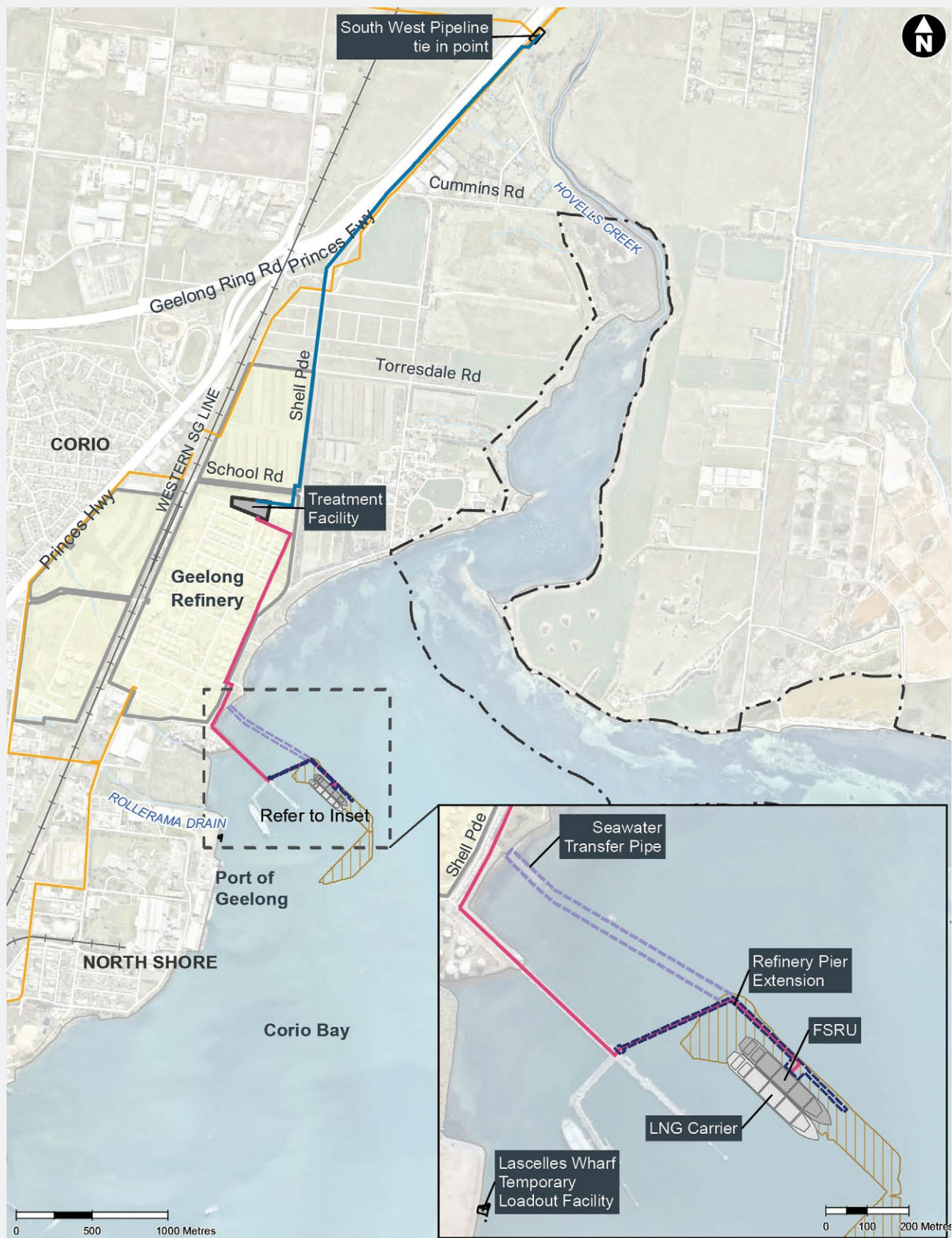
A decline in the availability of gas from sources such as Bass Strait, combined with inadequate transmission infrastructure to the northern Australian gas reserves, is predicted to result in a gas shortage for the south-eastern Australian domestic market by the mid-2020s.

Both the Australian Energy Market Operator (AEMO) and the Australian Competition & Consumer Commission (ACCC) have identified a range of measures to address and mitigate the predicted shortfalls, which include the development of LNG terminals.

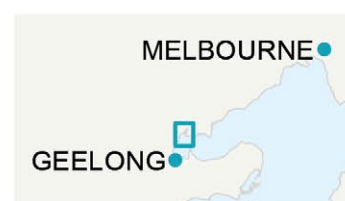
An LNG terminal would offer a more cost-effective supply of gas compared to transporting gas long distances via a pipeline network. Gas, like many commodities, can be transported more cost effectively by ship. In this way, the terminal can be thought of as a 'virtual pipeline' bringing gas from where it is available to where it is needed. LNG terminals would form an important part of Victoria's energy infrastructure mix and would be an important measure to avoid the predicted gas supply shortfall.

The project would enable gas imports of up to 160 petajoules (PJ) per year to meet the shortfall and improve energy security and affordability by providing a flexible new source of gas close to major demand centres.





- Aboveground Pipeline
- Underground Pipeline
- Seawater Transfer Pipe
- Refinery Pier Extension
- Dredged Area
- South West Pipeline
- Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site
- Viva Energy Owned Land
- +— Rail



1.4 Project description

Construction and commissioning of the project is estimated to take up to 18 months. The project is anticipated to operate for approximately 20 years.

1.4.1 Construction

The key construction works for the project include:

- Localised dredging of seabed sediment at Refinery Pier to allow sufficient depth for the new berth pocket and for visiting LNG carriers to turn
- Excavation of a shallow trench in the seabed for the seawater transfer pipe from the pier to the refinery seawater intake
- Construction of a temporary loadout facility at Lascelles Wharf
- Construction of the Refinery Pier extension and supporting infrastructure
- Installation of the aboveground gas pipeline and the treatment facility within the refinery boundary
- Trenching and installation of the underground gas transmission pipeline, connecting to the SWP at Lara.

There are no construction activities required for the FSRU component of the project. The vessel would be built, commissioned and all production and safety systems verified prior to being brought to site.

1.4.2 Operation

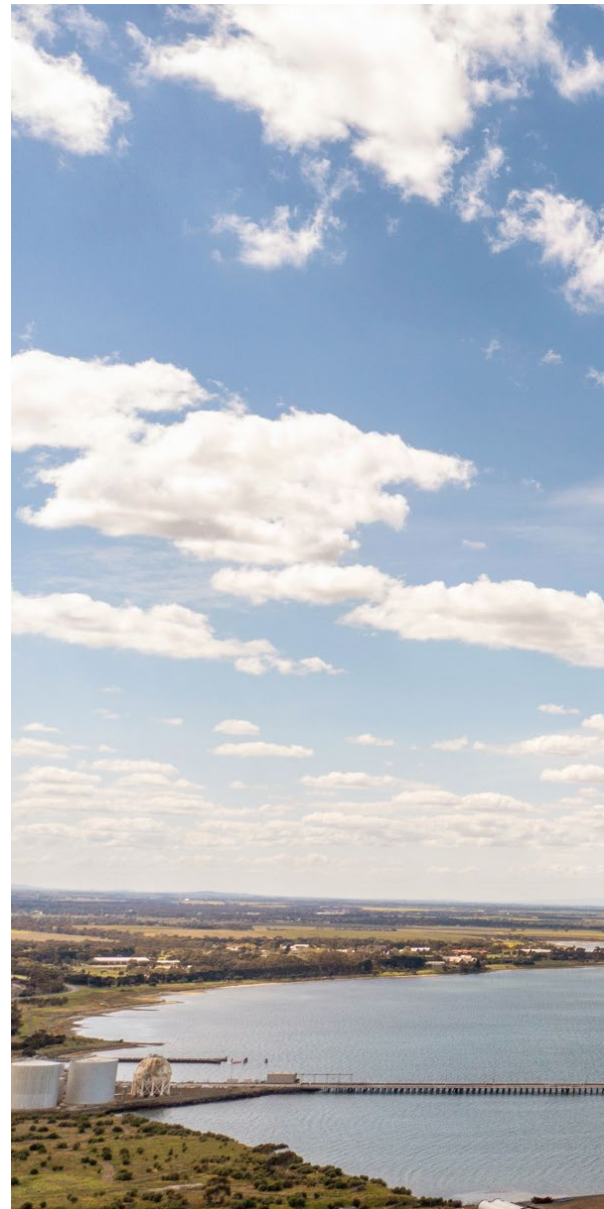
The project would operate 24 hours a day, 7 days a week in line with the refinery's existing hours of operation.

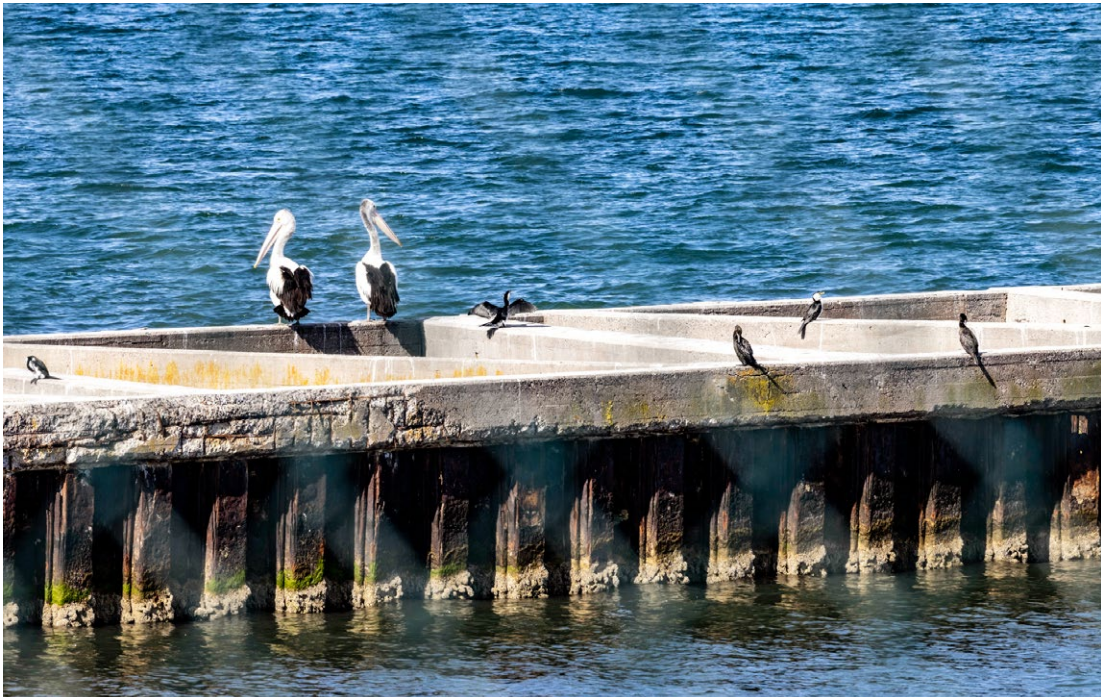
LNG would be delivered to the FSRU at the newly constructed Refinery Pier No. 5 from external suppliers. Up to 45 LNG carriers would visit the gas terminal annually to deliver LNG, depending on the LNG carrier's storage capacity and gas demand. Gas demand is typically higher during the winter months when gas is required for heating.

The LNG carrier would moor alongside the FSRU with the assistance of tugboats and transfer their LNG cargo into the FSRU. Once the transfer of LNG is complete, the LNG carrier would depart from the berth with the assistance of the tugboats and leave the port.

The FSRU stores LNG in a liquid state at very low temperatures (approximately -160°C).

When gas is needed, the FSRU would convert the LNG from a liquid state into a gaseous state using seawater as a heating medium. This process is known as 'regasification'. The gas would then be transferred into the aboveground pipeline on the pier to the treatment facility, and then through the underground pipeline into the Victorian gas network (via the SWP) at Lara.





Project assessment

What is an EES?

An EES describes a project and its potential environmental effects. The EES process is not an approval in itself, but an assessment by the Minister as to whether the project is considered acceptable or otherwise in terms of potential environmental impacts. The EES informs regulatory authorities on whether or not the project should proceed, and if so, under what conditions

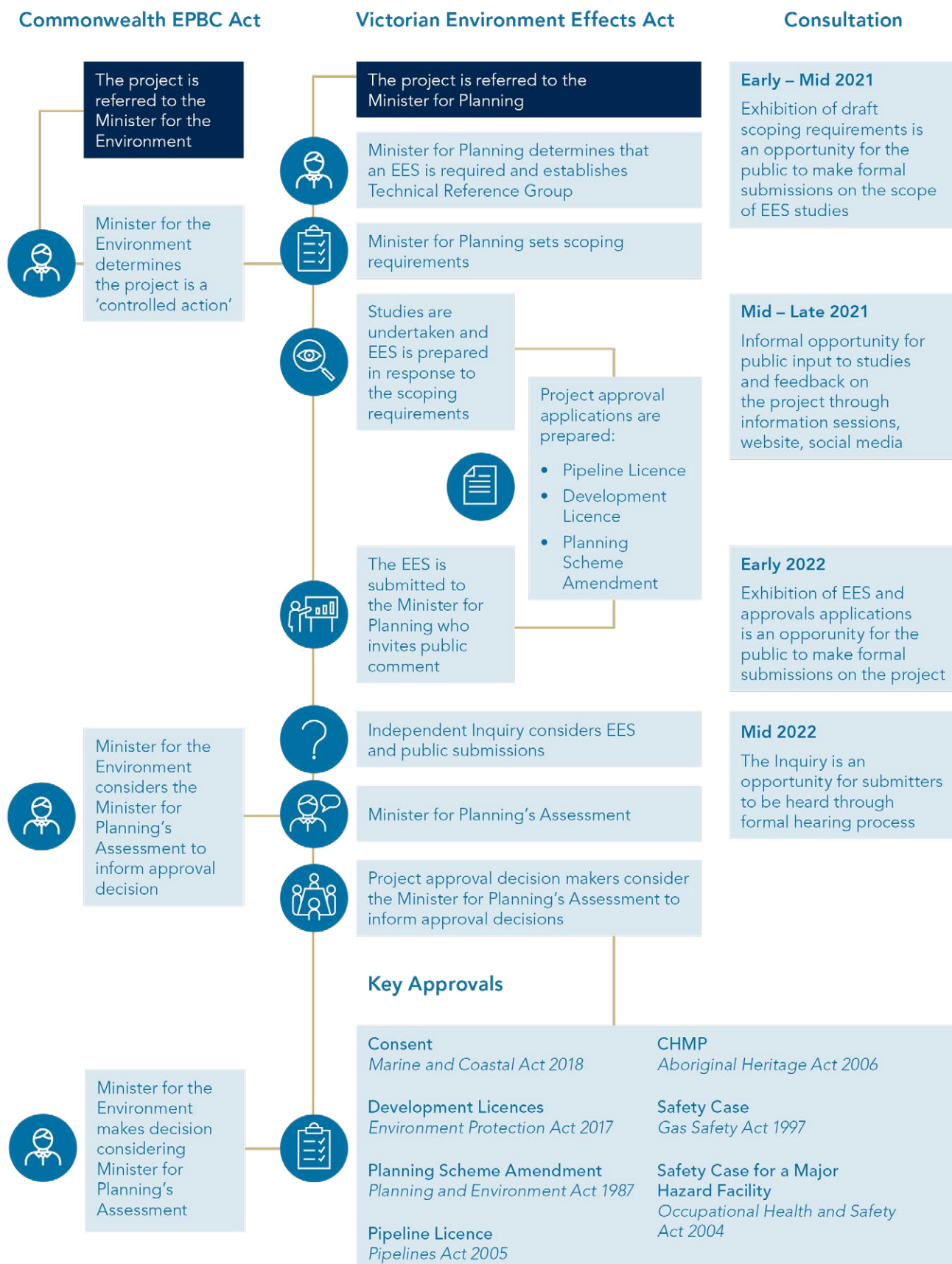
2.1 Requirement for an EES

On 28 December 2020, the Victorian Minister for Planning issued a decision determining that an EES under the *Environment Effects Act 1978* (Vic) ('Environment Effects Act') was required for the project due to the potential for a range of significant environmental effects. The Minister identified several primary areas of potential environmental impact requiring consideration, namely:

- The project has the potential for significant adverse effects on the marine environment of Corio Bay including marine water quality. Sediment mobilisation and water discharges may impact on the marine ecosystem, including seagrass and other habitat for listed fauna species, some of which are listed under the *Flora and Fauna Guarantee Act 1988* (Vic) and EPBC Act, and potentially the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site.
- The project has potential for contributing to greenhouse gas emissions which warrant further investigation of the nature and extent.
- The Minister also identified a number of secondary areas of potential environmental impact to be addressed through integrated assessments, namely:
- Other potential effects of the project on air quality, noise, land use, Aboriginal and historic heritage, native vegetation, groundwater, traffic and transport, as well as visual amenity.

Read more about the EES process for the project at www.planning.vic.gov.au/environment-assessment/browse-projects/projects/viva-energy-gas-terminal-project.

- On 21 January 2021, the delegate for the Commonwealth Minister for the Environment determined the project to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ('EPBC Act') due to potential significant impact on the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar wetland, listed threatened species and ecological communities and listed migratory species.
- The EES process is an accredited assessment process under the EPBC Act through a Bilateral Assessment Agreement that exists between the Commonwealth and State of Victoria. Therefore, this EES also considers Matters of National Environmental Significance (MNES) for the purposes of assessment of the controlled action under the EPBC Act. You can make a submission on the matters assessed for the purposes of the relevant provisions under the EPBC Act, by making a submission on the EES (see more information about making submissions on the EES below).
- After considering the Victorian Minister for Planning's assessment under the Environment Effects Act, the Commonwealth Minister for the Environment will then make a separate decision as to whether to approve the controlled action application for the proposed project under the EPBC Act.



2.2 Approach to the EES

The EES main report is split into 4 parts and is accompanied by 16 technical reports and 7 attachments.

2.2.1 Part 1 – Understanding the Viva Energy Gas Terminal Project

Part 1 of the EES main report comprises Chapters 1 to 7 which provide a detailed understanding of the project and the approach to the EES.

Chapter 1: *Introduction* introduces the project background, setting and history.

Chapter 2: *Project rationale* explains why the project is needed in the context of the projected gas shortfall and climate policy.

Chapter 3: *Project alternatives* and development describes the project development and the various alternatives and design concepts, and locations considered.

Chapter 4: *Project description* provides a detailed description of the construction and operation of the project.

Chapter 5: *Legislative framework and approval requirements* provides a description of the key legislation and approval requirements for the project. Further details on the legislation and policy considered in the EES are also provided in Attachment III: *Legislation and policy report*.

Chapter 6: *Stakeholder and community engagement* details the consultation and engagement activities undertaken for the project and key issues raised.

Chapter 7: *Assessment framework* describes how the environmental impact assessments were conducted.

2.2.2 Part 2 – Primary areas of assessment and Part 3 – Secondary areas of assessment

To ensure that all key issues were addressed in the EES, 16 technical studies have been undertaken. The technical studies assessed potential impacts on the environment from the project construction and operation and recommended mitigation measures to address potential impacts.

The EES has been structured around the primary and secondary areas of assessment identified in the Minister for Planning's decision. The primary issues for assessment represent the potential impacts of most concern for the project that required detailed assessments.

Part 2 – Primary areas of assessment comprises Chapters 8 and 9 and focuses on the potential effects on the marine environment and greenhouse gas emissions.

Part 3 – Secondary areas of assessment comprises Chapters 10 to 13 and considers the potential effects on the land environment, amenity and environmental quality, safety and heritage.

Chapter 10: *Land environment* summarises the assessments undertaken for:

- Terrestrial ecology
- Surface water
- Groundwater
- Contamination and acid sulfate soils.

Chapter 11: *Amenity and environmental quality* summarises the assessments undertaken for:

- Air quality
- Noise and vibration
- Landscape and visual amenity
- Transport
- Social and business impacts
- Land use and planning.

Chapter 12: *Safety* discusses safety of the maritime and port operations and summarises the safety, hazard and risk assessment.

Chapter 13: *Heritage* summarises the Aboriginal cultural heritage and historic heritage assessments.

Detailed assessment of the existing conditions and key issues relating to each environmental aspect can be found in the corresponding technical reports.

2.2.3 Part 4 – Key findings and environmental commitments

Part 4 of the EES main report comprises Chapters 14 to 16 which summarise the key findings of the environmental assessments and Viva Energy's environmental commitments for the project.

Chapter 14: *Environmental Management Framework* details the mitigation measures proposed to avoid, minimise and manage the potential impacts of the project, and how these would be implemented.

Chapter 15: *Sustainability* describes the processes undertaken by Viva Energy to embed sustainability into the design of the project.

Chapter 16: *Key findings* presents the key findings of the environmental assessments that are further discussed in Part 2 and Part 3 of the EES and the technical reports.



EES Executive Summary

EES Chapters

Part 1

Understanding the Viva Energy Gas Terminal Project

Ch. 1	Introduction	Ch. 5	Legislative framework and approval requirements
Ch. 2	Project rationale	Ch. 6	Stakeholder and community engagement
Ch. 3	Project alternatives and development	Ch. 7	Assessment framework
Ch. 4	Project description		

Part 2

Primary areas of assessment

Ch. 8	Marine environment	Ch. 9	Greenhouse gas emissions
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Part 3

Secondary areas of assessment

Ch. 10	Land environment	11-5	Social and business
10-1	Terrestrial ecology	11-6	Land use
10-2	Land and water values	Ch. 12	Safety
Ch. 11	Amenity and environmental quality	12-1	Maritime and port operations safety
11-1	Air quality	12-2	Hazard and risk assessments
11-2	Noise and vibration	Ch. 13	Heritage
11-3	Landscape and visual	13-1	Aboriginal cultural heritage
11-4	Transport	13-2	Historic heritage

Part 4

Key findings and environmental commitments

Ch. 14	Environmental Management Framework	Ch. 16	Key findings
Ch. 15	Sustainability		

EES Technical Studies (Technical Reports)

A: Marine ecology and water quality impact assessment	F: Groundwater impact assessment	L: Social and business impact assessment
B: Dredged sediment disposal options assessment	G: Contamination and acid sulfate soils impact assessment	M: Land use impact assessment
C: Greenhouse gas impact assessment	H: Air quality impact assessment	N: Safety, hazard and risk assessment
D: Terrestrial ecology impact assessment	I: Noise and vibration impact assessment	O: Aboriginal cultural heritage impact assessment
E: Surface water impact assessment	J: Landscape and visual impact assessment	P: Historic heritage impact assessment
	K: Transport impact assessment	

EES Attachments

I: Energy demand and market statement	V: Development Licence Applications
II: Risk to the project from climate change	VI: Pipeline Licence Application
III: Legislation and policy report	VII: Draft Planning Scheme Amendment
IV: Matters of National Environmental Significance	

Next steps in the EES process

The EES together with the draft Greater Geelong Planning Scheme Amendment (PSA), the EPA Development Licence applications for the FSRU and the amendment to the Geelong Refinery activities, and the Pipeline Licence application will be available for public comment for 30 business days. Written submissions can be made starting 28 February 2022 and closing 11.59pm on 11 April 2022.

3.1 How to access the EES and exhibited documents

The EES, draft PSA, EPA Development Licence applications and the Pipeline Licence application will be available to read and download at www.vivaenergy.com.au/gas-terminal-ees.

Should COVID-19 restrictions allow hard copies of the EES, draft PSA, EPA Development Licence applications and the Pipeline Licence application will be made available at the following locations during the exhibition period:

- Geelong Library & Heritage Centre – 51 Little Mallop St, Geelong VIC 3220
- Corio Library – Moa St & Cox Rd, Norlane VIC 3214
- State Library of Victoria – 328 Swanston St, Melbourne VIC 3000

Subject to COVID-19 restrictions on Community Facilities. Please check the COVIDSafe Settings for Victoria for updates: www.coronavirus.vic.gov.au/coronavirus-covidsafe-settings.

Please also check the project website for updates on viewing locations: www.vivaenergy.com.au/gas-terminal-project.

You can request an EES information pack, free of charge. The pack contains:

1. USB loaded with the complete EES, draft PSA, EPA Development Licence applications and Pipeline Licence application
2. Printed EES Summary Document
3. Printed information sheet on 'How to Navigate the EES'.

For those who may have accessibility issues, or where electronic options are impracticable, hard copies may be requested, free of charge.

An EES information pack or hard copy documents can be requested by phoning 1800 515 093 or emailing energyhub@vivaenergy.com.au.

3.2 How to make a submission

Submissions on the EES, draft PSA, EPA Development Licence applications and Pipeline Licence application must be made in writing and received by 11.59pm on 11 April 2022.

Each submission is a public document and will be treated as a submission on the EES and on the other exhibited documents (draft PSA, EPA development licence applications and the pipeline licence application). Only one submission is needed to address all of your views about the project, its effects and the relevant documents. Online submissions are preferred and can be lodged via the Victorian Government's engagement website: engage.vic.gov.au/viva-gas-terminal-IAC.

Where a submitter is unable to lodge a submission online, they must contact Planning Panels Victoria (PPV) through the DELWP Customer Call Centre on **136 186 (select option 6)** and request a hardcopy submission coversheet. Each hardcopy submission must be accompanied by a coversheet issued by PPV for privacy reasons. All submissions must state the name and address of the person making the submission. Petition responses will be treated as a single submission and only the first names from a petition submission will be registered and contacted.



Submissions will be treated as public documents and will be published on the Engage Victoria website. Do not include personal information in the body of your submission (such as your email address or phone number or photos of people, particularly children). Your submission and your name will be made public.

The submission process is independently managed by PPV and any inquiries regarding the management of submissions and the Inquiry and Hearing process should be directed to PPV.

3.3 Inquiry and advisory committee process

The Minister for Planning will appoint an independent Inquiry and Advisory Committee (IAC) under the EE Act and the Planning and Environment Act 1987 to hold an inquiry into the project and its environmental effects. The IAC will review the public submissions, the EES, the draft PSA and the EPA development licence applications. It will consider the environmental effects of the project in accordance with the Terms of Reference issued by the Minister for Planning.

The IAC may also be appointed by the Minister for Energy, Environment and Climate Change as a panel under the Pipelines Act to consider written submissions and the pipeline licence application.

After the exhibition period, the IAC will hold a Directions Hearing likely in the week commencing 2 May 2022 or the week commencing 9 May 2022, where the necessary arrangements and timetable for the public hearing will be established.

Further information about the Directions Hearing arrangements (including whether it will be held in person or conducted online by video conference) will be published on engage.vic.gov.au/viva-gas-terminal-IAC when determined. The IAC will follow the health advice from the Victoria Government and the Chief Health Officer in making this decision.

The Public Hearing process will likely commence in the week beginning Monday 20 June 2022 and run for approximately 4 to 5 weeks (if required).

Members of the public and any other parties seeking to be heard at the public hearing are required to submit a written submission and indicate on the online submission form or hard copy submission coversheet that they would like to be heard at the hearing.

Information on the hearing process and timetable will be published as it becomes available at engage.vic.gov.au/viva-gas-terminal-IAC.

The IAC will provide a report to the Minister for Planning who will consider this report to inform the Minister's assessment of the project's environmental effects. The Minister's assessment of the project will make recommendations about whether the environmental effects of the project are acceptable and will inform statutory decision-makers responsible for issuing environmental approvals for the project.

