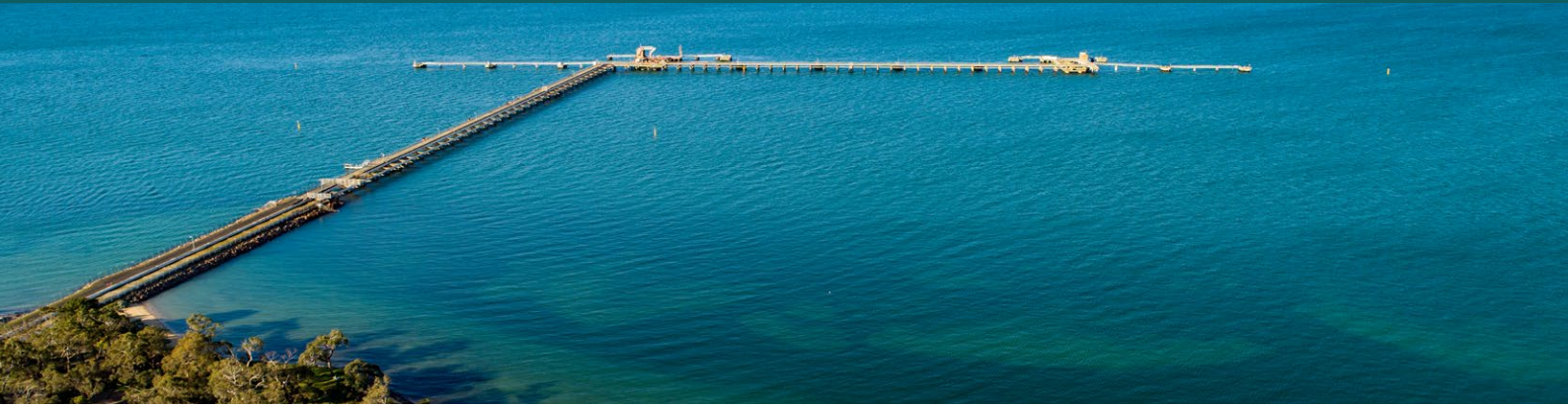


Executive Summary



Overview

AGL Wholesale Gas Limited (AGL) and APA Transmission Pty Ltd (APA) are proposing to develop the Gas Import Jetty and Pipeline Project (the Project) to supply imported natural gas into the south-eastern Australian gas market for industrial, commercial and residential gas customers. The Project would meet a projected gas supply shortfall and improve gas supply certainty from 2024 onwards.

Victoria needs to find alternative sources of gas supply. The abundant gas supplies Victoria has enjoyed since the 1960s are in decline particularly from Bass Strait's Gippsland Basin fields. While Australia is a major exporter of natural gas, most of this gas is produced far from demand centres and not available to customers in the south-eastern states.

To address the projected gas supply shortfall, AGL and APA propose to develop a new gas import facility and pipeline to be constructed in Victoria. The Project comprises two sets of works:

- **Gas Import Jetty Works**, located at Crib Point, comprising of a floating storage and regasification unit (FSRU), top side jetty infrastructure on the Crib Point Jetty and a Receiving Facility on land adjacent to the Crib Point Jetty
- **Pipeline Works** consisting of a gas pipeline and associated plant and structures between Crib Point and Pakenham to connect to the Victorian Transmission System (VTS) east of Pakenham.

AGL and APA are joint proponents for the Project. AGL is responsible for the Gas Import Jetty Works and APA is responsible for the Pipeline Works.

The Project would provide Victoria with an alternate and flexible source of natural gas, from existing and new LNG projects in Australia and around the world and has the potential to supply up to 160 petajoules of natural gas per annum. Due to the interconnected nature of gas and electricity markets on the eastern seaboard, the Project would not only provide benefits and energy security to the State of Victoria but also the other south-eastern states and the national economy more broadly.

Importantly, the Project would also assist in Victoria's transition to a low-carbon economy and provide the foundation for ensuring that energy security is maintained and keeps pace with a growing and changing Victoria. Liquefied natural gas (LNG) imports offers a flexible option of short-term and long-term energy supply that would provide customers with a secure, stable source of energy supply as the energy sector becomes decarbonised and transitions to more renewables.

In October 2018, the Victorian Minister for Planning determined that Project required assessment under the *Environment Effects Act 1978* (Environment Effects Act). The Environment Effects Statement (EES) for the Project provides an integrated assessment of the potential environmental, social and business impacts associated with the construction and operation of the Project.

The EES evaluates the potential effects of the Project on a local and project-wide basis and recommends mitigation measures in an Environmental Management Framework (EMF) that defines the environmental outcomes that must be achieved during the design, construction and operation of the Project to avoid, manage or mitigate the identified impacts.

Implementing these mitigation measures would result in a manageable number of adverse impacts occurring during the construction and operation phases of the Project.

The need for the Project

The Australian Energy Market Operator (AEMO) has predicted potential supply gaps in the eastern and south-eastern Australian states from 2024 onwards from existing and committed gas developments, unless additional southern reserves and resources, or alternative infrastructure, are developed (AEMO, 2020¹). The Project is necessary to provide an additional source of supply to fill the predicted shortfall. The Project would support essential energy supply to enable Victoria's energy security and support its continued liveability, economic development and growth.

In 2019, Australia was the world's largest exporter of LNG. The growth in LNG exports was driven by a rapid increase in gas liquefaction capacity in Australia's north-west and north-east. While LNG export projects draw on their own reserves and gas supply from the broader domestic market, gas markets in the high population centres of Australia's south-east are facing a decline in production from traditional gas supply sources. Specifically, the abundant gas supplies Victoria has enjoyed since the 1960s are in decline, particularly from Bass Strait's Gippsland Basin fields, which means that Victoria needs to find alternative sources of supply. Unless additional southern reserves and resources or alternative infrastructure are developed, domestic customers in the south-eastern states face a predicted market shortfall (AEMO, 2020).

The Project would assist in Victoria's transition to a low-carbon economy and provide the foundation for maintaining energy security to support the state's growth and development. LNG imports offers a flexible option of short and long-term secure energy supply to provide a secure, stable source of supply to customers as the economy and energy sector transitions to a greater proportion of renewables.

Benefits of the Project

The Project would contribute to the following benefits for Victoria:

- provide gas supply certainty and security for Victorian gas customers in a climate where gas shortfalls are projected for south-eastern Australian states due to declining gas production from the Gippsland and Otway Basin, and to customers from other states that rely on Victoria's gas supply
- place downward pressure on gas prices for residential customers as well as vulnerable industrial and commercial customers, many of whom are large generators of employment
- provide a flexible source of gas for gas-powered generation so that customers have secure and stable electricity supply as the National Energy Market transitions to accommodate more renewables.

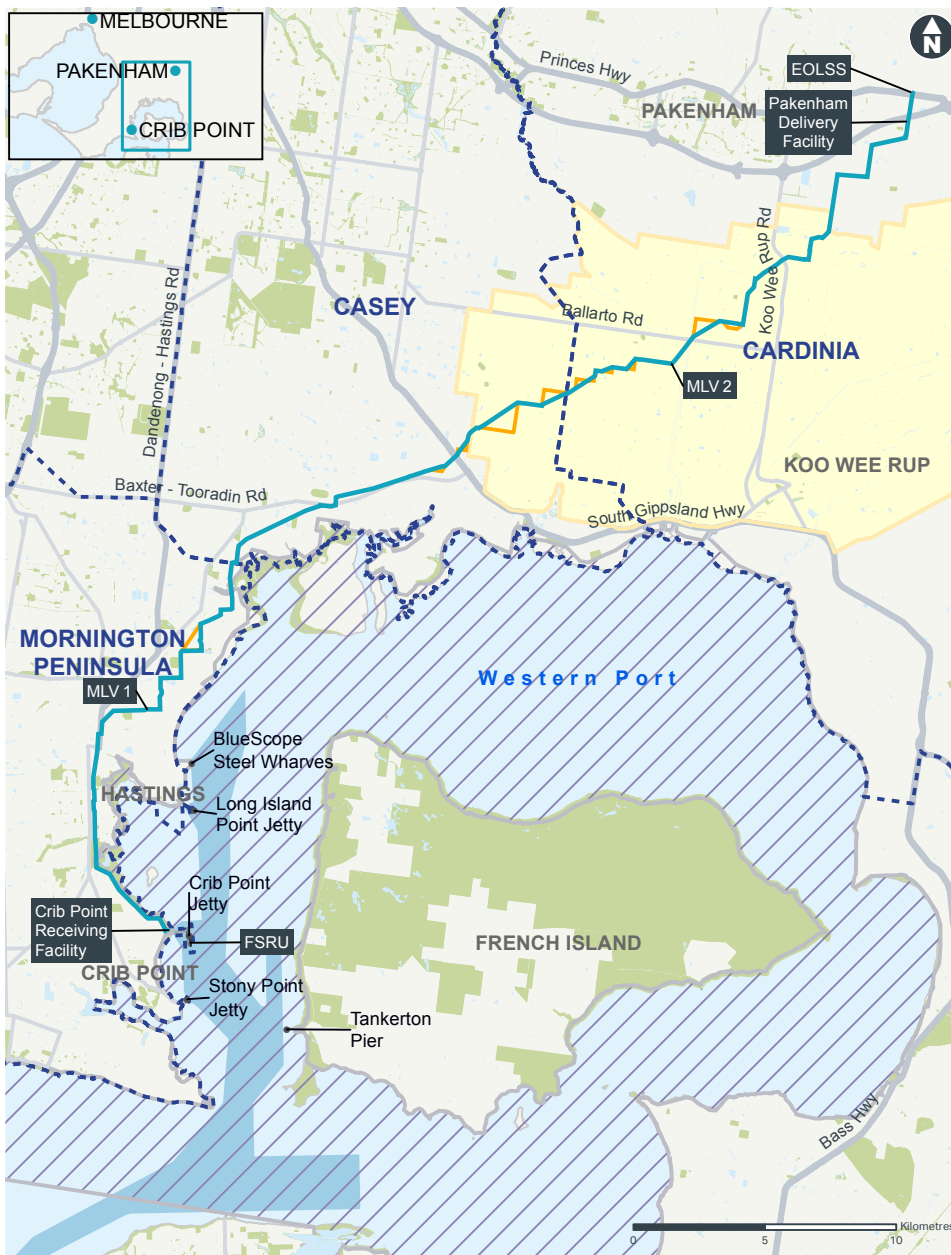
The Project is expected to employ in excess of 500 workers at the peak of its construction. Most of the construction workforce would be specialists sourced from Victoria and interstate. Opportunities for local suppliers and employment would include a range of general trade and support services including (but not limited to) crew for the FSRU, vegetation management, security guards and food contractors. Once the Project was operating, it is expected that 40 permanent positions would be created at Crib Point.

In addition, AGL has made a commitment to a Community Fund of \$7.5 million to be managed by a panel of community-based representatives if the Project proceeds. This fund would be established as a mechanism for sharing some of the benefits of the Project with the local community, particularly the townships of Crib Point and Hastings.

1 <https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2020/2020-gas-statement-of-opportunities.pdf?la=en>

The Project

The Project would be located to the south-east of the Melbourne Central Business District between Crib Point and Pakenham. The Gas Import Jetty Works would be located at Crib Point within the Mornington Peninsula Shire. The Pipeline Works would extend from Crib Point to Pakenham, crossing Mornington Peninsula Shire, City of Casey and the Shire of Cardinia. The proposed location of the Project is shown in **Figure 1**.



◀ **Figure 1:**
Project location

- Pipeline
- - - Pipeline Options
- - - Local Government Area
- Koo Wee Rup-Longwarry Flood Protection District (FPD)
- Western Port Ramsar site
- Port of Hastings boundary

Gas Import Jetty Works

The Project proposes to continuously moor a floating storage and regasification unit (FSRU) at Berth 2 of the Crib Point Jetty at Crib Point. An FSRU is a ship that can store liquefied natural gas (LNG). The FSRU is fitted with an onboard regasification unit that can return stored LNG into a gaseous state and then supply it into the gas network. The gas would be used as a fuel by domestic, commercial and industrial customers.

The FSRU is approximately 300 metres long and 50 metres wide and can store approximately 170,000 cubic metres (m³) of LNG. The FSRU stores LNG at a temperature of 163 degrees Celsius below zero (-163 °C) in cryogenic storage tanks. The cold temperature keeps the LNG in its liquid state until it is required to be supplied into the gas network.

Visiting vessels carrying LNG (LNG carriers) would berth alongside the FSRU to transfer LNG from the LNG carriers to the FSRU. These transfers could take up to approximately 36 hours. The FSRU would store the LNG as a liquid, and when required, return LNG back into a gaseous state by heating the LNG using either seawater or gas-fired boilers (a process known as regasification). Regasification would use the 'open loop mode', meaning that seawater would be used to warm the LNG into a gaseous state and discharged from the FSRU. The FSRU would also be able to operate in closed loop regasification mode where water is recycled within the FSRU and combined loop regasification mode in limited instances where seawater may need to be warmed prior to use in the FSRU.

Following regasification, the natural gas would be transferred through gas piping along the jetty from the FSRU to the Crib Point Receiving Facility and eventually into the existing gas transmission network via a new pipeline that would be built between Crib Point and Pakenham. The Crib Point Receiving Facility would include treatment facilities to inject odorant and nitrogen (as required) into the natural gas to meet VTS gas quality specifications.

When the FSRU is empty (when there is no more LNG in the storage tanks onboard), another ship would arrive to fill the FSRU.

A visualisation of the proposed FSRU at Berth 2 of the Crib Point Jetty and an LNG carrier moored alongside is shown in **Figure 2**.



Liquefied natural gas (LNG)

LNG is natural gas comprised primarily of methane that has been cooled down to below its boiling point, causing the gas to liquefy.

Once the natural gas is cooled to form a liquid, its volume is about 600 times smaller than its volume as a gas, making it an extremely economical way to transport large volumes to locations where pipelines do not reach, or where installing pipelines would be prohibitively expensive and/or would result in adverse environmental and social impacts. LNG is liquefied at low temperatures and therefore does not need to be stored under pressure.

Pipeline Works

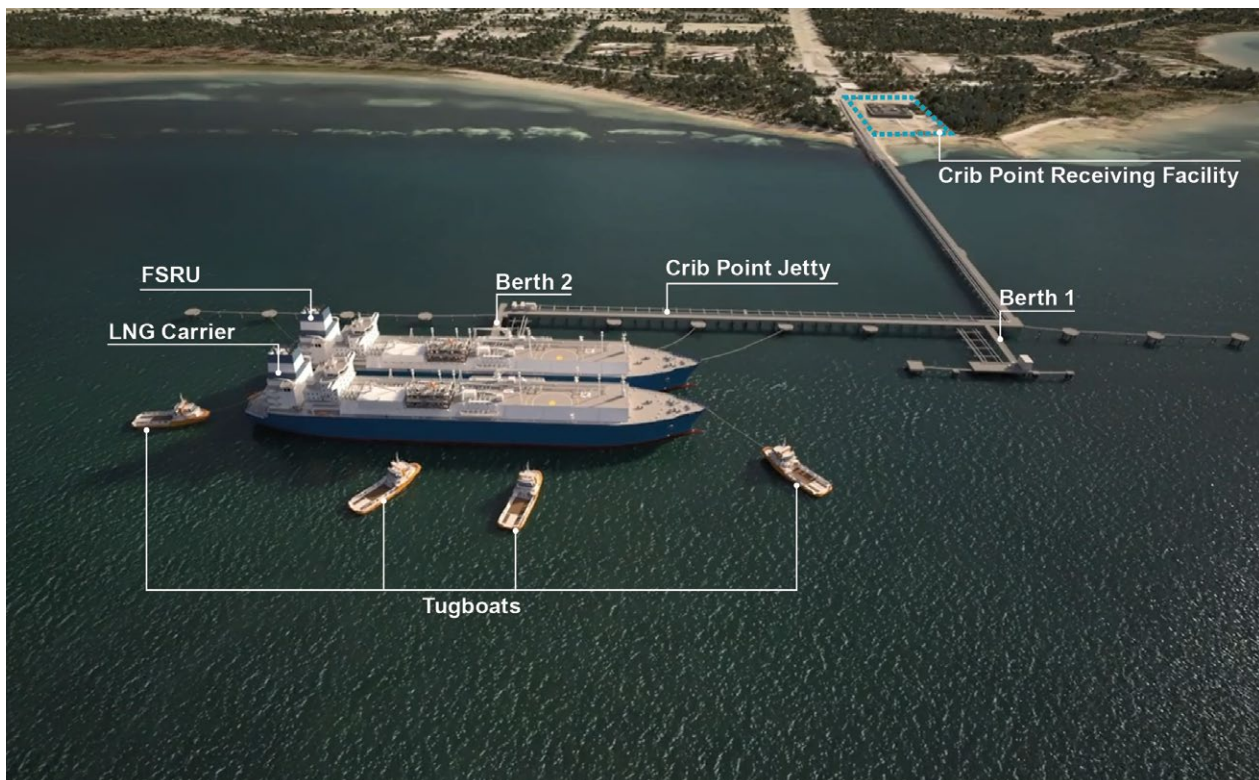
The Pipeline Works would comprise a bi-directional gas transmission pipeline to transport gas from the Crib Point Receiving Facility to the VTS east of Pakenham and would comprise the following facilities:

- an underground bi-directional gas transmission pipeline approximately 57 kilometres long, with a nominal diameter of 600 millimetres and buried at a depth of generally 1.2 metres below ground (to the top of the pipe), that would transport gas from the Crib Point Receiving Facility to the VTS east of Pakenham
- the pigging facility at the Crib Point Receiving Facility to enable in-line inspections of the pipeline with a pipeline inspection gauge (pig)
- the above-ground Pakenham Delivery Facility to monitor and regulate the gas which would be located adjacent to the Pakenham East rail depot
- the below-ground End of Line Scraper Station (EOLSS) located at the connection point to the VTS north of the Princes Highway in Pakenham
- two above-ground mainline valves (MLVs) located at different points along the pipeline alignment to enable isolation of the pipeline in an emergency.

The pipeline alignment has been selected to minimise impacts on sensitive land uses and where possible follows existing pipeline easements. The pipeline alignment would pass through a mix of land uses including rural residential, road corridors, conservation reserves, hobby farms, horse studs, agricultural, and horticultural areas.

Construction and commissioning of the Project is expected to take approximately 18 to 27 months. As a result of the linear nature of the Pipeline Works, pipeline construction would only occur at any given location for a portion of this period. In rural areas, work associated with each stage would move along the pipeline alignment at a rate of approximately 800 metres per day. In built up areas such as Hastings all construction stages would be completed simultaneously to minimise disruption and as a result the construction front would move at a slower pace.

▼ **Figure 2:** Visualisation of FSRU and LNG carrier berthed side by side at Crib Point Jetty



Planning for the Project

The Project has been informed by comprehensive environmental impact assessments that have incorporated community feedback and concerns received during the development of this Environment Effects Statement.

Requirement for an EES

The Project is being assessed under the *Environment Effects Act 1978* (Environment Effects Act) which provides for the assessment of proposed projects in Victoria that could have a significant effect on the environment.

The Project was referred to the Victorian Government under the Environment Effects Act as two separate projects (the Gas Import Jetty Works and Pipeline Works) on 13 September 2018 by AGL and APA respectively. Two separate referrals were submitted to allow consideration of all the components of the Project and corresponding direct, indirect and cumulative impacts. This approach enabled a comprehensive, integrated and transparent assessment of the overall proposal under the Environment Effects Act. On 8 October 2018, the Minister for Planning issued a decision determining that an EES was required under the Environment Effects Act to assess the potential environmental effects of the projects.

In February 2019, the Victorian Minister for Planning issued scoping requirements setting out the specific environmental matters to be investigated and documented in this EES.

Assessment under Environment Protection and Biodiversity Conservation Act 1999

Both the Gas Import Jetty Works and Pipeline Works were also referred to the Commonwealth Government under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) as two separate projects. On 28 November 2018, it was determined by the Commonwealth Minister that both projects were a 'controlled action' which required further assessment and approval under the EPBC Act due to the potential for the projects to have significant impacts on the internationally significant Western Port Ramsar site, listed migratory species, and listed threatened species and ecological communities.

The reason for this decision was based on a range of potential significant environmental effects including (but not limited to):

- The Project has the potential for significant environmental effects, including on native vegetation and the habitat of threatened terrestrial and aquatic species listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act), as well as risk to some aspects of the ecology in the North Arm of the Western Port Ramsar site.
- There are potential effects from construction and operation of a gas pipeline on water quality of waterways and the Western Port Ramsar site and on Aboriginal cultural heritage.
- While these potentially significant effects and other residual effects could be assessed and managed through a range of separate statutory processes, an EES is warranted to help ensure the effects and relevant uncertainties of the Project are rigorously investigated as part of an integrated assessment process before any statutory approval decisions are made.

The Victorian EES process is accredited to assess impacts on Matters of National Environmental Significance (MNES) under the EPBC Act through the Bilateral Assessment Agreement that exists between the Commonwealth and State of Victoria. Therefore, this EES also considers MNES.

The EES Process

An EES is an assessment of the potential impacts of a project and its ability to meet statutory requirements. It provides decision-makers (including relevant Ministers and statutory authorities) with the information they need to make decisions about whether statutory approvals for the Project should be granted and, if so, what conditions should apply. The EES process is designed to be rigorous and transparent, with opportunities for stakeholders and community input.

This EES:

- describes the proposed Project
- describes the existing environment that may be affected by the Project
- assesses the Project's potential effects on the environment
- assesses alternative Project layouts to meet the evaluation objectives
- describes measures to avoid environmental risks and mitigate negative potential effects where appropriate
- proposes an environmental management framework for managing and monitoring potential environmental effects during implementation of the Project.

In addressing the above, the EES has investigated and documented the specific matters set out in the scoping requirements issued by the Minister for Planning for the Project.

This EES presents a holistic assessment of the Project. It considers the Gas Import Jetty Works and Pipeline Works independently (considering individual design approach, construction methodology, operation and specific potential environmental impacts of each of the works) as well as a whole (considering the cumulative impacts of the Project overall). It includes 17 specialist studies and impact assessments undertaken to ensure that the EES addresses the scoping requirements set by the Minister for Planning.

Project key approvals

The Project requires a number of key approvals including:

- approval under the EPBC Act for the Gas Import Jetty Works and the Pipeline Works
- a Works Approval under the *Environment Protection Act 1970* (Vic) for the FSRU component of the Gas Import Jetty Works
- Pipeline Licence under the *Pipelines Act 2005* (Vic) for the construction and operation of the Pipeline Works which includes a Construction Environment Management Plan and a Safety Management Plan
- consent under the *Marine and Coastal Act 2018* (Vic) for development of marine and coastal Crown land, for some components of the Gas Import Jetty Works and some components of the Pipeline Works
- Planning Scheme Amendment to apply the Specific Controls Overlay to the Gas Import Jetty Works, allowing for the application of an Incorporated Document to the site under the Mornington Peninsula Planning Scheme and in accordance with the *Planning and Environment Act 1987* (Vic)
- Cultural Heritage Management Plans (CHMPs) for the Gas Import Jetty and the Pipeline Works under the *Aboriginal Heritage Act 2006* (Vic)
- Safety Cases under the *Gas Safety Act 1997* (Vic) for the natural gas transmission infrastructure for the Gas Import Jetty Works (excluding the FSRU) and Pipeline Work, and under the *Occupational Health and Safety Act 2004* (OHS Act) (Vic) for the FSRU (note the FSRU is currently not classified as Major Hazard Facility (MHF) under the OHS Act²).
- permits to take native flora and fauna species listed under the *Flora and Fauna Guarantee Act 1988* (Vic).

² Note: WorkSafe Victoria is considering a change to the Regulations that would classify the FSRU as an MHF for the purposes of the OHS Act. While the MHF laws do not currently apply, AGL would submit a safety case that is consistent with MHF requirements to WorkSafe Victoria for approval as if the FSRU was an MHF)

Assessing the potential impacts of the Project

The Project has been assessed against the draft evaluation objectives set out in the EES scoping requirements. The draft evaluation objectives identify the desired outcomes to be achieved in terms of identifying and managing the potential impacts of constructing and operating the Project.

Site selection, including the pipeline alignment and the selection of Crib Point as the preferred location for the FSRU and associated aspects of the Gas Import Jetty Works, was a key component to avoid and reduce potential impacts.

Selection of the pipeline alignment was based on several environmental, social and economic values taking into consideration the key constraints and opportunities afforded by existing and proposed land use and infrastructure. The pipeline alignment was developed in consultation with landholders and other stakeholders, with reference to the overarching considerations of public safety, and potential environmental, social and economic impacts.

The Crib Point Jetty and immediately adjacent landside area was selected as the preferred location for the Gas Import Jetty Works as the site makes use of the existing, available infrastructure in a contextually appropriate setting being the Port of Hastings and adjacent to the former BP refinery land. It was considered that potential environmental impacts could be minimised as there is no requirement to conduct channel dredging due to suitable existing depths to enable the FSRU and the LNG carriers to access the Crib Point Jetty (Berth 2). Additionally, the Project would make use of the already disturbed landside footprint at Crib Point for the Project. The proximity of the Crib Point Jetty site to the Victorian gas network allows for connection of a new supply source into the Victorian gas market, ensuring security and reliability of gas supply to south-eastern Australia markets.

Following initial site selection, 17 specialists technical studies were undertaken for the EES to assess the Project's potential impacts (positive and negative) and to identify mitigation measures to avoid, minimise and/or manage potential impacts.

The key findings from each of the specialist technical studies are summarised in **Table 1** (Key findings – Construction) and **Table 2** (Key findings – Operation).

Further details are provided in the main EES report and the individual specialist technical reports attached to this EES.

Construction

Table 1: Key findings – Construction

Technical study	Key findings from the construction impact assessment	Project component
Marine Biodiversity	Spills and leaks of contaminants could occur through construction of the facilities on the Crib Point Jetty. These types of minor spills and leaks would involve very small quantities in contained areas (bundled work areas, workshops, equipment operational areas) and would be identified and managed with documented standard operating procedures. Any spill or leak during construction would generally cause minimal damage to the surrounding environment.	Gas Import Jetty Works
Terrestrial and freshwater biodiversity	<p>The previous and existing land use at Crib Point, and along much of the pipeline alignment, means that many areas have already been disturbed and cleared of native vegetation. There are limited patches of native vegetation and possible habitat for native flora and fauna, particularly around waterways and areas close to the Western Port shoreline, such as Warringine Park.</p> <p>Specific measures to avoid or minimise impact include the use of horizontal directional drilling (HDD) in sensitive locations such as dense vegetation and at waterway crossings, and reduction in width of the ROW in multiple locations. The alignment of the pipeline was selected and refined to minimise loss of native vegetation (including but not limited to habitat for threatened and non-threatened flora and fauna) in accordance with relevant legislations and regulations including AS2885.1-2012 Section 4.2, the APGA Code of Environmental Practice: Onshore Pipelines and the Significant Impact Guidelines 1.1 (EPBC matters) and the Guidelines for the removal, destruction or lopping of native vegetation (DELWP, 2017).</p> <p>Targeted surveys carried out resulted in further pipeline alignment design revisions to avoid Southern Brown Bandicoot habitat (such as at Cardinia Creek). Design iterations have also resulted in the avoidance of habitat and individual species of Merran's Sun-orchid, Gaping Sun-orchid and Pallid Sun-orchid. An approximately 650-metre-long HDD section would be used during pipeline construction to avoid any potential impacts to the known population of Merran's Sun-orchid, as well as known Gaping Sun-orchid and Pallid Sun-orchid individuals.</p> <p>In some instances, using HDD is not feasible due to other constraints. Open trenching during pipeline construction would occur through areas of suitable habitat for Dwarf Galaxias (Craigs Lane Drain, Tooradin Inlet Drain, Hagelthornes Drain and Western Outfall Drain), which may result in minor short-term impacts to this species. Open trench works are unlikely to impact on Australian Grayling as no potential habitat was identified in waterways where this construction method would be used. HDD is proposed at waterways where Australian Grayling are assumed likely to be present. Mitigation measures to reduce potential impact on possible habitat for these species have been identified.</p>	Pipeline Works
Surface water	<p>The Project is located in the Western Port Catchment. Western Port is the primary receiving water for surface water flows from the Western Port catchment.</p> <p>The assessment identified the following potential impacts that may occur without appropriate mitigation in place:</p> <ul style="list-style-type: none"> • runoff from disturbed areas containing sediment • trenching, stockpiling of material, the creation of disturbed areas and trenching across • waterways all increase the potential for sediment to discharge to nearby waterways and be deposited in the Western Port Ramsar site • increase in flood levels which could impact neighbouring properties through stockpiling materials for significant lengths. <p>The potential for adverse impacts on waterways including Western Port would be managed through implementation of standard construction site mitigation measures including stabilising disturbed ground and exposed soils, water to suppress dust and using appropriate storage with secure bunding for chemicals and fuels.</p> <p>The Pipeline Works would cross a number of waterways. Each waterway crossing has been assessed to determine the most appropriate construction method, having regard to the sensitivity of the waterway and constructability considerations. HDD would be used for waterways where there is a risk of sedimentation causing adverse impacts on the waterway or on Western Port.</p>	Pipeline Works

Technical study	Key findings from the construction impact assessment	Project component
Groundwater	<p>Several of the potential groundwater impacts associated with constructing the Pipeline Works are related to lowering groundwater levels if dewatering activities are required. Dewatering has the potential to affect registered bore users, groundwater dependent ecosystems and encourage saline intrusion into fresher water. In addition, the quality of groundwater could be reduced by HDD drilling muds, poor quality runoff entering open trenches and auger drilling for piling causing aquifers to connect. The groundwater studies found that potential construction impacts on groundwater would be minor and could be managed with mitigation measures including:</p> <ul style="list-style-type: none"> • limiting the duration of dewatering activities • using non-toxic and biodegradable HDD drilling muds where practicable • conducting works in low or no flow conditions • using contractors suitably qualified and experienced in trenchless installation techniques and piling • compacting the backfill after trenching using excavated material where practicable to reduce potential for preferential lateral flow along the trench • minimising the time that trench sections were open. 	Gas Import Jetty Works and Pipeline Works
Contamination and acid sulfate soils	<p>The contamination sampling program and assessment concluded that soil contamination is limited in extent. Contaminated soils were identified at the Crib Point Receiving Facility, The Esplanade adjacent to the former Western Port BP refinery and the Railway corridor in Hastings. Any disturbance of these areas for works would be readily manageable with industry standard procedures and waste disposal measures.</p> <p>The potential environmental impact associated with acid sulfate soils (ASS) is limited by the shallow depth of trenching and horizontal boring and the short duration of stockpiling and dewatering activities (where groundwater is intersected). Where dewatering is required, the reduction in groundwater levels is also estimated to be of limited magnitude and limited lateral extent.</p> <p>The proposed construction methodologies and industry standard measures for managing contaminated soil and water would confine potential impacts within the Project Area and have very limited effect on the surrounding area.</p> <p>As such, the risks of potential impacts from soil and groundwater contamination and ASS from construction have been assessed as low or very low with the relevant mitigation measures in place.</p>	Gas Import Jetty Works and Pipeline Works
Greenhouse gas	<p>Greenhouse gas emissions during construction are predicted to be below the National Greenhouse and Energy Reporting Scheme reporting requirements.</p> <p>The Project's estimated Scope 1 (direct emissions) and Scope 2 (indirect emissions) construction emissions are estimated to contribute the equivalent of 0.02 per cent of Victoria's annual greenhouse gas emissions.</p>	Gas Import Jetty Works and Pipeline Works
Air quality	<p>During construction, the main potential air quality impacts would be through the creation of dust (PM10). Sensitive receptors near the construction works may be exposed to nuisance dust for relatively short periods of time with an Institute of Air Quality Management risk rating of medium (without mitigation) from earthworks and associated activities. These impacts would be localised and short-term given the linear progression of construction along the pipeline alignment.</p> <p>There are no forecast human health impacts from construction generated dust from the Project with implementation of proposed mitigation measures.</p>	Gas Import Jetty Works and Pipeline Works

Technical study	Key findings from the construction impact assessment	Project component
Noise and vibration	<p>The Project's potential noise impacts were modelled at sensitive receptors at Crib Point and along the pipeline alignment.</p> <p>Noise levels at dwellings and other receptors near the construction works are predicted to be higher than current levels for a short time. The noise would mostly be caused by vehicles and other plant and equipment needed to efficiently construct the pipeline and the Project's permanent facilities such as the Crib Point Receiving Facility.</p> <p>Construction works would be conducted during EPA Victoria normal working hours (where possible) and managed by adopting good practice techniques set out in the EPA Victoria publication 1254 – Noise control guidelines.</p> <p>Noise and vibration during the Project's construction may reduce amenity for some receptors (such as nearby residential dwellings) but likely only for a short time due to the linear progression of the pipeline's construction.</p> <p>Unavoidable night works associated with HDD construction are predicted to have the greatest impact without additional on-site mitigation measures. When on-site mitigation measures could not adequately reduce this noise, off-site management measures would be implemented in consultation with affected residents.</p>	Gas Import Jetty Works and Pipeline Works
Landscape and visual	<p>Amenity impacts during construction have been minimised where possible through the optimisation of the pipeline alignment to determine the most efficient route with the least impact to visual amenity, the environment and community. Optimising the pipeline alignment allows for the retention of valuable vegetation and situates the works away from receptors. The reinstatement of the right of way progressively after pipeline construction with consideration of vegetation composition and ground surface adjacent to the Project Area would minimise potential landscape and visual impacts.</p>	Gas Import Jetty Works and Pipeline Works
Transport	<p>During construction, road safety and traffic operation would be temporarily impacted in relation to traffic volumes, intersection safety, road closures, pedestrians and cycling, as well as potential impacts to public transport. The development of a Traffic Management Plan and Public Transport Disruption Plan would be the primary mitigation measure aimed at ensuring that heavy vehicles use appropriate roads and that disruptions to local vehicle, cycling and pedestrian movements are minimised.</p>	Gas Import Jetty Works and Pipeline Works
Safety, hazard and risk	<p>Potential safety hazards are primarily centred on the workforce rather than the community during construction. The workforce would be exposed to hazards routinely experienced in the construction of major infrastructure such as moving equipment, excavation hazards, heavy lifting, working over water and the like. Construction areas and laydown yards would be adequately segregated and secured preventing access to the public. This may include, but is not limited to, fencing, barricading and barriers, and/or signage depending on the location.</p> <p>All construction activities would be undertaken in accordance with AGL and APA and contractor health and safety plans to protect the workforce and the community.</p>	Gas Import Jetty Works and Pipeline Works
Land use	<p>During construction, traffic and amenity impacts on existing land uses proximate to Crib Point Jetty, and between the Jetty and Hastings township, would be minor and manageable. Construction within Hastings would occur predominantly within the existing rail corridor which would minimise the anticipated amenity impacts. Existing agricultural and rural living land uses between Hastings and the Pakenham Delivery Facility would also experience minor amenity impacts, which would be managed throughout the construction phase.</p> <p>The Project has been assessed as having potential for some short-term impacts on existing land uses during construction including restricting access to a limited number of premises and the use of agricultural land. However, in relation to the Pipeline Works would be temporary due to the linear progression of construction along the pipeline alignment.</p>	Gas Import Jetty Works and Pipeline Works
Social	<p>The Project avoids direct impacts on community facilities including public open space areas. Where these areas can't be avoided, mitigation measures such as using HDD techniques to construct the pipeline through Warringine Park would maintain access during construction.</p> <p>Potential short-term adverse impacts on nearby residents and community facilities during construction relate to amenity impacts such as noise and dust emissions and a range of mitigation measures have been developed. In addition, a Stakeholder Engagement Management Strategy would facilitate ongoing consultation with stakeholders including councils and potentially affected community members.</p>	Gas Import Jetty Works and Pipeline Works

Technical study	Key findings from the construction impact assessment	Project component
Business	<p>The Project has sought to avoid potential direct and indirect impacts on non-agricultural businesses during construction through judicious site and pipeline alignment selection. The most substantial cluster of non-agricultural businesses near the Project is in Hastings. The pipeline alignment has been refined to use the existing rail corridor through Hastings, which avoids or minimises both direct impacts such as changes to access and indirect impacts such as noise and dust.</p> <p>The Project would not significantly impact on the operability or access to other businesses near the Project such as the Victorian Maritime Centre, Flinders Aquaculture Fisheries Reserve, commercial shipping channels or Port of Hastings operations during construction.</p> <p>Consultation with potentially affected businesses would be carried out in accordance with the Stakeholder Engagement Management Strategy that would be prepared for the Project.</p>	Pipeline Works
Agriculture	<p>The main agricultural impact would occur through the pipeline construction including reduced access on a temporary basis, potential loss of production and loss or damage to agricultural facilities and capital improvements. Compensation and consultation for affected landholders, and reinstatement and soil stabilising works would be adopted to minimise potential adverse land use effects. In addition, an appropriate construction and rehabilitation method for each soil type along the pipeline alignment would be implemented to mitigate potential agricultural impacts.</p>	Pipeline Works
Historic heritage	<p>A total of 22 historic sites were identified in the historic heritage impact assessment study area. Of these, 13 are located within 100 metres of the Project's construction and operation footprint. The only identified heritage site that construction of the pipeline would directly impact is the curtilage of the Denham Road farmhouse. The site comprises the remnants of a 19th century farmhouse complex, as shown in Figure 6. There is also potential for the construction works to directly impact the former BP refinery administration building with vibration from trenching and a laydown area near the building's curtilage (the building and its allotment in a three-dimensional setting, including beneath the site). Mitigation measures to avoid, minimise and manage potential impacts on historic sites would be:</p> <ul style="list-style-type: none"> trenchless construction techniques (mainly HDD) at the Denham Road farmhouse, a condition survey and monitoring of the former BP refinery administration building before and after construction to determine any damage, and the rectification of any damage identified the Environmental Management Plan would include a procedure for any unexpected cultural heritage objects found during construction to guide their collection or salvage. <p>Implementing these mitigation measures would address any anticipated impacts on historic heritage from the Project's construction and operation.</p>	Gas Import Jetty Works and Pipeline Works
Aboriginal cultural heritage	<p>Three Cultural Heritage Management Plans (CHMPs) were prepared to comply with the EES process and to assess the likelihood of harming Aboriginal cultural heritage within the Project's construction and operation footprint. The CHMPs for the Pipeline Works (CHMPs 15383 and 152384) and the Gas Import Jetty Works (CHMP 16300) identified 14 registered Aboriginal cultural heritage places within the construction and operation footprint. Four of these places were previously registered and an additional 10 were identified during investigations for the CHMPs. The Project's construction is expected to disturb some of these places. The study identified additional risks including the disturbance of not previously registered Aboriginal cultural heritage places.</p> <p>Mitigation measures include implementing and complying with the CHMP management conditions and marking construction areas with survey pegs and/or marking tape or similar to keep construction works within approved CHMP Activity Areas. The management conditions for each CHMP were developed in consultation with relevant regulatory bodies and Traditional Owner groups. The conditions include general and specific conditions and they become legal requirements once the CHMPs are approved under the Aboriginal Heritage Act 1996 (Vic).</p>	Gas Import Jetty Works and Pipeline Works

Operation

Table 2: Key findings – Operation

Technical study	Key findings of the operational impact assessment	Project component
Marine biodiversity	<p>The seawater intakes and discharges from the FSRU present potential risks to the marine environment, including:</p> <ul style="list-style-type: none"> plankton and other small organisms in seawater being drawn into the FSRU the discharge of chlorinated seawater back into Western Port after electrolysis treatment to control biofouling in the FSRU piping and heat exchangers (biofouling occurs when marine organisms accumulate and can block or corrode systems or structures – the electrolysis produces chlorine and other products to prevent their growth) when seawater discharged from the FSRU is cooler or warmer than the seawater in Western Port. <p>Other risks and potential Project impacts on the marine environment are associated with activities that are common to normal shipping activities. These impacts would be readily managed with project specific mitigation measures and the existing Port of Hastings management plans that apply to all vessels using the port.</p> <p>Entrapment of small marine biota</p> <p>The FSRU would take in seawater from Western Port for the heat transfer process required to transform the LNG into a gas. The FSRU would also use seawater for other purposes including for cooling engines, ballast, the firefighting system and freshwater production. Sea chests on the side of the FSRU would draw the seawater into the FSRU. An electrolytic process would chlorinate the seawater to prevent biofouling and once it had served its purpose, the water would be discharged back into Western Port.</p> <p>When seawater is drawn into the FSRU, small marine organisms (very small fish, zooplankton, phytoplankton, drifting fish eggs and larvae) can pass through the screens of the seawater chests and be transported through the FSRU systems. This is known as entrainment. The speed that seawater was taken into the FSRU would be managed so the flow strength was low enough to prevent the entrainment of larger marine organisms by allowing them to swim away.</p> <p>A hydrodynamic model of Western Port was developed as part of the marine impact assessment to:</p> <ul style="list-style-type: none"> help understand how small marine organisms move within and through different parts of Western Port with the tides and currents estimate the percentage of small marine organisms that would be entrained in seawater taken into the FSRU. <p>The modelling assumed that no entrained organisms would survive before seawater was discharged back into Western Port, which means the mortality estimates are the highest possible (worst case scenario).</p> <p>The modelling predicts the percentage of small marine organisms entrained into the FSRU and assesses a number of different operational scenarios including:</p> <p>Peak and average rates of gas production, when operating in open loop mode – this is important because the volume of seawater continuously drawn into the FSRU regasification unit increases as the gas production rate increases.</p> <p>Open loop and closed loop operating modes – this is important because the volume of seawater used for regasification is higher in open loop mode (because closed loop mode recirculates the seawater while open loop mode continuously draws in and discharges seawater).</p> <p>The largest continuous volume of seawater would be drawn into the FSRU when it is operating in open loop mode at peak gas production. The FSRU would typically operate at a lower than peak gas production rate, therefore requiring less intake of seawater.</p>	Gas Import Jetty Works

Technical study	Key findings of the operational impact assessment	Project component
Marine biodiversity (Cont.)	<p>The marine studies found that in the peak regasification operating scenario for the FSRU in open loop mode, potential entrainment impacts are predicted to be small relative to natural mortality and flushing. Significant implications on Western Port's ecosystem would be unlikely. For average (or normal) FSRU operations, the entrainment rate is predicted to be lower.</p> <p>The marine studies identified that fish eggs and larvae are most abundant in the North Arm of Western Port during spring and summer. The potential effects of entrainment on fish eggs and larvae would therefore be highest over spring and summer.</p> <p>To minimise potential entrainment impacts the FSRU is proposed to operate at a 14-day moving average (mean) regasification seawater flow of 312,000 m³ per day between September and February (inclusive). The use of a 14-day moving average reflects the sensitivity of certain marine biota and accounts for their renewal rate and the flushing rate in North Arm of Western Port that has been established as part of the marine entrainment investigations.</p> <p>The proposed 14-day average (mean) regasification seawater flows for March to August (inclusive) is 468,000 m³ per day.</p> <p>Seawater discharges</p> <p>Once the seawater was used on the FSRU it would be discharged into Western Port. The discharged seawater would contain chlorine-produced oxidants and products from the electrolysis of seawater used to control biofouling in the FSRU piping and heat exchangers. This seawater would be either cooler or warmer than the water in Western Port, depending on whether open loop or closed loop regasification mode was used (water discharged in open loop mode is cooler than water discharged in closed loop mode).</p> <p>Modelling was developed to understand the potential effects on the marine environment when cooler or warmer seawater containing chlorine-produced oxidants was discharged into Western Port. In addition, guideline values for temperature and chlorine-produced oxidants were developed using the outcomes of the marine investigations and in association with leading agencies such as the CSIRO. The modelling also assessed a range of FSRU operating scenarios to understand how each scenario affected the results.</p> <p>For all modelled FSRU operating scenarios, the predicted extent of the area above the temperature and chlorine guideline values is limited to the shipping basin and ship berthing areas within Port of Hastings boundaries.</p> <p>The combined area of the seabed where the guideline values for temperature and chlorine are predicted to be exceeded comprises seabed that has previously been dredged and is regularly subject to sediment resuspension by propeller wash from existing shipping activities at the Crib Point Jetty.</p> <p>Water temperature and chlorine associated with discharged seawater from the FSRU would not impact mangroves, saltmarsh, seagrasses and subtidal reefs, or fauna such as waterbirds that use these habitats.</p> <p>Once the FSRU is operating, a marine monitoring program would verify that actual environmental impacts are not greater than predicted. If any unexpected circumstances are detected, appropriate action would be taken to meet the environmental responsibilities of AGL and APA.</p> <p>The marine monitoring program would be required in relevant approvals such as the Works Approval and EPA Victoria licence for the FSRU and the EPBC Act approval for the Gas Import Jetty Works.</p>	Gas Import Jetty Works
Terrestrial and freshwater biodiversity	<p>The potential for direct and indirect impacts on terrestrial and freshwater flora and fauna from the Project's operation were investigated, such as disturbance from noise and light and possible food chain impacts from seawater intakes and discharges from the FSRU.</p> <p>Primary foraging and roosting areas for waterbirds are some distance from the FSRU and are not impacted by lighting, noise or temperature variations and chlorine associated with the marine discharge from the vessel. The level of entrainment of small marine biota into the FSRU water intakes is negligible and is not anticipated to result in trophic changes that may impact on waterbird habitat or food sources.</p> <p>The studies found the Project's operation would be unlikely to significantly impact terrestrial or freshwater flora and fauna values. Mitigation measures and monitoring during operation would reduce the potential for minor impacts and enable a response to any unforeseen impacts.</p>	

Technical study	Key findings of the operational impact assessment	Project component
Surface water	<p>The pipeline would be underground once operational and there would be no permanent change to existing topography which could redirect flows or increase flood levels.</p> <p>Potential impacts identified during operation include the spilling of hazardous chemicals or substances and changes in floodplain function from the construction of permanent infrastructure. Potential spills and leaks during operation would be readily managed. The design of permanent surface structures including the facilities at the Crib Point Receiving Facility and the Pakenham Delivery Facility would maintain existing overland flow paths and not increase flood levels upstream of these sites.</p>	Gas Import Jetty Works and Pipeline Works
Groundwater	<p>Longer-term potential impacts on groundwater included preferential flow paths within the trenched sections of the Pipeline Works and impeded groundwater flow due to piles installed for the Crib Point Receiving Facility.</p> <p>The assessments found limited potential for longer-term groundwater impacts with mitigation measures implemented, such as compacting the backfill after trenching, installing trench breakers, limiting the size of the piling footprint and spacing the piles an appropriate distance apart.</p> <p>The assessments found very limited potential for groundwater quality and movement to affect the ecological character of the Western Port Ramsar site.</p>	Gas Import Jetty Works and Pipeline Works
Contamination and acid sulfate soils	<p>Potential impacts to human health and the environment from operation of the Project included leaks or spillages from machinery/plant, fuel and chemicals storage, maintenance activities, receipt and addition of odorant and nitrogen and pigging activities, and management of waste streams.</p> <p>These potential impacts were considered to be minor with the application of regulatory requirements, industry standards, guidelines and mitigation measures such as maintenance of vehicles and equipment to minimise potential for leaks and spills to occur.</p>	Gas Import Jetty Works and Pipeline Works
Greenhouse gas	<p>Project activities that would cause the release of greenhouse gases (GHG) during operation into the atmosphere include:</p> <ul style="list-style-type: none"> • burning fossil fuels in vehicles, plant and equipment • the production of electricity from burning fossil fuels (such as coal or natural gas) • manufacturing processes (for steel or cement, for example). <p>The Project is using an FSRU to convert (regasify) LNG to natural gas. The FSRU is required to meet the International Maritime Organization efficiency standards.</p> <p>Greenhouse gas emissions were estimated for open and closed loop modes on the FSRU. The emissions were calculated using a conservative approach that assumed the FSRU would produce the upper limit of 160 petajoules of natural gas over a 12-month period.</p> <p>Scope 1 and 2 annual greenhouse gas emissions from the Project's operation are estimated to be the equivalent of 0.23 per cent of Victoria's annual emissions in closed loop mode and 0.06 per cent under in open loop mode.</p> <p>The overall greenhouse gas emissions per annum for the combined construction and operational phases of the Project (in either closed or open loop modes) are the equivalent of less than one per cent of Victoria's total annual greenhouse gas emissions.</p> <p>The most significant opportunity for minimising operational greenhouse gas emissions is the use of open loop operating mode that uses sea water to heat the LNG, rather than the combustion of natural gas in boilers.</p> <p>Greenhouse gas emissions associated with the operation of the FSRU would be managed in accordance with the EPA Victoria's Protocol for Environmental Management (PEM) to minimise potential impacts alongside other management practices. The PEM would include conducting a minimum level 2 audit on the FSRU operation annually to identify inefficiencies; preparation of an action plan for implementing greenhouse gas emissions reduction measures; annual reporting of measures to the EPA and regular reviews for a period of three years.</p>	Gas Import Jetty Works and Pipeline Works

Technical study	Key findings of the operational impact assessment	Project component
Air quality	<p>During operation, the FSRU would meet the State Environment Protection Policy (Air Quality Management) (SEPP (AQM)) design criteria at sensitive receptors such as residences and there are no forecast air quality impacts on other areas such as public spaces adjacent to Crib Point Jetty. This indicates that the FSRU could operate in compliance with the SEPP (AQM) and the <i>Environment Protection Act 1970</i>.</p> <p>There were some exceedances of the SEPP (AQM) design criteria over water within approximately 50 metres of the FSRU for NO₂ and approximately 200 metres of the FSRU, at a number of areas over water to the south and east of the FSRU and a small area of the Crib Point foreshore for formaldehyde. While there are exceedances of the SEPP (AQM) design criteria over water for NO₂, air quality impacts are considered to be negligible as the exceedances are predominately within the exclusion zone for port operations at the jetty. Maximum predicted ground level formaldehyde concentrations are approximately 15 per cent of the Protective Action Criteria, indicating there would be no adverse health impacts to workers or receptors in the vicinity of the FSRU.</p> <p>Mitigation measures during operation include the maintenance of the FSRU burners and monitoring FSRU emissions to ensure emission rates comply with design specifications. In addition, the Project will require both a Works Approval and an EPA licence prior to operations, which will ensure that the FSRU operates in compliance with set air emission limits and conditions requiring monitoring, reporting and auditing. The Works Approval application is currently exhibited with the EES.</p> <p>With implementation of the identified mitigation measures, potential impacts on air quality would be minimised during construction and would meet the SEPP (AQM) design criteria at sensitive receptors during operation.</p>	Gas Import Jetty Works and Pipeline Works
Noise and vibration	<p>Modelled operational noise scenarios without mitigation measures for the facilities at Crib Point and Pakenham exceeded the recommended levels at nearby receptors. However, operational facilities would be designed to meet the noise criteria as per EPA Victoria publication 1411 - <i>Noise from industry in regional Victoria</i> (NIRV) and EPA Publication 1413 - <i>Applying NIRV to proposed and existing industry</i> through the application of additional mitigation measures. With the adoption of the proposed mitigation measures to achieve the intent of the NIRV, including cumulative noise impacts from nearby industry, operational noise is low impact.</p> <p>Operational noise at Crib Point is predicted to be closest to the recommended noise levels at night when the PoHDA tugboats are assisting with mooring of LNG carriers. Mooring could occur anytime throughout the day, although the likelihood that a night arrival of an LNG carrier at the same time as peak FSRU regasification is low. To further mitigate noise disturbance to residents on these occasions, residents within 1.5 kilometres of the FSRU could be notified at least 24 hours before the planned arrival of an LNG carrier at night if the verification noise monitoring demonstrates that there are noise exceedances at the sensitive receptors. Verification monitoring for the varying operation scenarios would be conducted within six months of commissioning to demonstrate compliance with the criteria established for the Project.</p>	Gas Import Jetty Works and Pipeline Works

Technical study	Key findings of the operational impact assessment	Project component
Landscape and visual	<p>Once operating, the Project would have a negligible to minor landscape and visual impact depending on the location along the pipeline alignment from Crib Point to Pakenham. The most visible impact would result from the FSRU and Crib Point Receiving Facility, although these uses are consistent with the port and industrial land uses expected in the designated Port of Hastings. Lighting from the Gas Import Jetty Works would not cause an increase of directly measurable luminance at any of the assessed viewpoints at sensitive receptors. Notwithstanding this, mitigation measures would be implemented to minimise any potential adverse lighting effect.</p> <p>During the Project's operation, the underground pipeline would be visually marked by marker posts at intervals which is a regulatory requirement. There are many similar markers posts from other pipelines along much of the proposed pipeline alignment and the additional markers are not expected to impact landscape values.</p> <p>Potential landscape and visual impacts would be minimised through:</p> <ul style="list-style-type: none"> • reinstating the ROW progressively after pipeline construction with consideration of vegetation composition and ground surface adjacent to the area • introducing screening vegetation to above-ground facilities • selecting materials and finishes which complement the setting and environment and minimise reflective surfaces • maintaining surfaces to prevent aesthetic deterioration. <p>With implementation of the identified mitigation measures, potential impacts on landscape values and visual amenity would be minimised during construction and operation of the Project.</p>	Gas Import Jetty Works and Pipeline Works
Transport	<p>There are expected to be minor impacts to the level of service of key local and declared roads due to additional workforce, nitrogen and odorant truck movements during operation. These impacts would be managed through the implementation of a Nitrogen Transport Plan. Local roads and roads around urbanised areas such as Hastings would be avoided where feasible to avoid potential impacts on other road users and pedestrians and cyclists.</p>	Gas Import Jetty Works and Pipeline Works

Technical study	Key findings of the operational impact assessment	Project component
Safety, hazard and risk	<p>The operational hazards resulting from a release of flammable gas with subsequent ignition leading to a fire or explosion have been a primary focus of the hazard analysis, risk assessments and safety studies completed for the Project.</p> <p>Quantitative Risk Assessment results show the risk of fatalities due to a potential major incident such as a fire or explosion at the Gas Import Jetty Works and the Pakenham Delivery Facility meet the requirements of relevant regulatory guidelines. This means that these facilities do not present an unacceptable or disproportionate risk to any of the adjacent land uses.</p> <p>The pipeline Safety Management Study identified 212 potential threats to the Pipeline Works. Credible risks were further evaluated, and mitigation measures incorporated into the design. Of the 98 credible threats, one was evaluated as presenting an intermediate level of risk. This related to the risk of the pipeline being punctured by vertical auger boring (drilling) to install new power poles.</p> <p>Mitigation measures were developed and incorporated into the pipeline design including physical protective measures such as thicker than required pipeline wall thickness and greater than required depth of cover material above the pipeline. The incorporation of these mitigation measures means the pipeline design exceeds the requirements of Australian standard for pipeline design being AS/NZS 2885.1.</p> <p>Additional mitigation measures include:</p> <ul style="list-style-type: none"> • the Project would be designed, constructed and operated to meet relevant safety standards • a process control system and an automated emergency shutdown system to monitor abnormal conditions • fire protection for the Gas Import Jetty Works would be in compliance with Australian Standards • storage and handling of dangerous goods would be undertaken to meet Australian standards • routine visual monitoring of chemical and fuel storage facilities • emergency response plans developed and implemented for construction and operation • a site safety advisor would be appointed during construction <p>Safety assessments conducted for the Project indicate that both the Pipeline Works and Gas Import Jetty Works would be compliant with all relevant safety standards and not pose unacceptable risks to people, property and the environment.</p>	Gas Import Jetty Works and Pipeline Works
Land use	<p>The operation of the Project would result in minor impacts to existing and future land uses, where the pipeline easement would place constraints on existing and future land uses due to restrictions on construction of any permanent structures in the pipeline easement. In addition, the acquisition of easements for pipeline infrastructure and a small parcel of land for the Pakenham Delivery Facility would be required. Neither of these land acquisitions are expected to have significant impacts given the proposed location of the pipeline, the limited number of land uses affected, as well as the broadacre rural use of the affected land. Overall, operational impacts would be minimal and affected landowners would receive compensation for the acquisition of the easements.</p> <p>The overall Project has been assessed as being consistent with the general land use policies and provisions within the local Planning Schemes along the pipeline alignment.</p>	Pipeline Works

Technical study	Key findings of the operational impact assessment	Project component
Social	<p>The Project would provide gas supply certainty and security for Victorian gas customers and assist to place downward pressure on gas prices. It would also provide a flexible source of gas-fired electricity as the National Energy Market transitions to more renewable sources.</p> <p>AGL has committed to a \$7.5 million community fund if the Project proceeds to share some of its benefits with the local community. A panel of community-based representatives would manage the fund.</p> <p>The Project is expected to employ more than 500 workers at its construction peak. Most would be specialists from Victoria and interstate. Ongoing business and job opportunities for local suppliers and employment would include for general trade and support services such as the FSRU crew and security staff and food contractors and vegetation management. The Project is expected to create more than 40 permanent jobs once it starts operating.</p> <p>Using existing infrastructure within the Port of Hastings has minimised impacts on the local community around Crib Point and Hastings as much as possible. The FSRU would use existing mooring at Berth 2 of the Crib Point Jetty and the landside facilities would be on vacant land within the Port Zone and would not encroach on existing public open space to the north and south including Woolley's Beach.</p> <p>Community consultations and the assessment of potential social impacts identified that some local people consider using existing port facilities as not compatible with the use of adjacent areas for social activity and active and passive recreation.</p> <p>The community impact assessment also found that some users of recreational areas at Crib Point may decide to use other nearby recreational areas due to concerns with noise and lighting from the Project's facilities. Consultations with the Crib Point Stony Point Committee of Management Inc. and the community would identify a suitable foreshore location and propose additional recreational infrastructure to accommodate activity displaced from Woolley's Beach North.</p>	Gas Import Jetty Works and Pipeline Works
Business	No substantial impacts associated with local businesses were identified for the Project's operation.	Gas Import Jetty Works and Pipeline Works
Agriculture	Impacts on agricultural activities once the pipeline is operating are considered unlikely. The pipeline is not considered likely to restrict the construction of farm improvements and deep cultivation within the pipeline easement nor loss of production through soil degradation caused by unsatisfactory reinstatement method. An appropriate reinstatement method would be used to avoid ongoing loss of production.	Pipeline Works
Heritage (Historic and Aboriginal)	No impacts associated with the Project's operation were identified in relation to Aboriginal cultural heritage or historic heritage.	Gas Import Jetty Works and Pipeline Works

Managing the Project's potential impacts

The Project would be designed, constructed and operated in accordance with an Environmental Management Framework (EMF) which is contained in **Chapter 25 Environmental Management Framework**. The EMF provides the environmental management and monitoring arrangements for the delivery of the Project.

The development of the EMF has been informed by the 17 specialist technical reports completed as part of the EES, the scoping requirements, and relevant legislation, policy and guidelines.

The EMF outlines the management plans required for design, construction and operation phases of the Project. It also outlines a program for community consultation, stakeholder engagement and communications during the construction and operation of the Project, including opportunities for local stakeholders to engage with AGL and APA to seek responses to issues that might arise when the Project is undertaken.

The key statutory approvals would include conditions requiring the preparation of management plans in accordance with the EMF. For the Pipeline Works, the Pipeline Licence would require a Construction Environmental Management Plan and Safety Management Plan. These plans would be required to be accepted and approved by the Minister for Energy Environment and Climate Change and ESV. Similarly, for the Gas Import Jetty Works (including the FSRU) the Planning Scheme Amendment would apply an Incorporated Document with conditions requiring approval of development plans and environmental management plans by the Minister for Planning. The Works Approval for the FSRU component of the Gas Import Jetty Works would ensure the FSRU operates in compliance with set air emission limits and conditions requiring monitoring, reporting and auditing.

Contractors have and would be engaged for the design, construction and operation of the Project. Tender documentation used for the appointment of contractors would require that contractors demonstrate compliance with all requirements specified in the EMF and all relevant Project approval conditions.

The statutory approvals and consents that are required for the Project to proceed would be implemented through a series of plans that would be required as conditions of approval. The plans would be required to implement and achieve compliance with relevant standards, guidelines and statutory approval obligations for the approvals and consents and to reflect the mitigation measures. Contractors would be responsible for reporting compliance to AGL and APA, who would then be responsible for compliance and associated reporting to relevant regulators as required.

All contractor documents prepared for the Project would be required to align with the documents and mitigation measures referenced in the statutory approvals and consents where relevant, as they detail mandatory conditions and contingency measures to protect environmental and social values throughout the life of the Project.

Next steps in the EES process

The EES for the Project, including the draft Planning Scheme Amendment, EPA Victoria Works Approval application and the Pipeline Licence application will be on public exhibition for 40 business days.

Written submissions on any matters described in the EES and approvals and licence documents can be made during this time.

Submissions can also be made on the draft Planning Scheme Amendment (Attachment VI Draft Planning Scheme Amendment), the Works Approval application (Attachment VIII Works Approval Application) and the Pipeline Licence application (Attachment IX Pipeline Licence Application).

The EES documents including the approvals and licence documents will be available online at www.gasimportprojectvictoria.com.au.

Register to receive an EES information pack, free of charge by phoning 1800 039 600 or emailing AGLcommunity@agl.com.au. An EES information pack contains:

- A USB loaded with the complete EES, draft Planning Scheme Amendment, EPA Works Approval and Pipeline Licence application
- A printed EES Summary Document
- A printed copy of the EES Map Book
- An information sheet on 'How to Navigate the EES'.

For those who may have accessibility issues, or where electronic options are impractical, hard copies may be requested, free of charge. Requested items will be provided in time for the start of the exhibition period. For requests received after exhibition starts, items will be provided within a week of your request.

Please note the EES is a long document and we encourage the use of electronic versions.

Making a submission

Submissions on the Gas Import Jetty and Pipeline Project EES, draft Planning Scheme Amendment, the Works Approval application and Pipeline Licence application must be made in writing and received by 11.59pm on Wednesday 26 August 2020.

Each submission will be treated as a submission in response to all the exhibited documents, so only one submission addressing all of your views about the Project is needed.

Online submissions are preferred and can be lodged via the Victorian Government's engagement website at www.engage.vic.gov.au/crib-point-IAC.

For hard copy submissions to be considered, they must be accompanied by a coversheet, available by calling the Department of Environment, Land, Water and Planning Customer Service Centre on 136 186. Each written submission must have its own coversheet. Submissions cannot be directly copied from another.

All submissions must state the name and address of the person making the submission. Where a submission is made by two or more persons (including an organisation), it must state the name and address of the person who will speak to the submission in any public hearing and be the contact person for the submission. Anonymous submissions will not be considered. Submissions will be treated as public documents and will be published on the Victorian Government's engagement website. Therefore your submission and your name will be made public.

Information about the EES submission process or public hearings is available from the DELWP website at www.delwp.vic.gov.au or by phoning its Customer Contact Centre on 136 186.

Concluding the EES Process

The Minister for Planning will appoint a joint Inquiry and Advisory Committee (IAC) under the *Environment Effects Act 1978* and the *Planning and Environment Act 1987*. The IAC will also be appointed as a panel under other applicable legislation. It will review the public submissions, the EES, the draft Planning Scheme Amendment, the EPA Works Approval application and the Pipeline Licence application. It will review and consider the environmental effects of the Project in accordance with Terms of Reference issued by the Minister for Planning.

After the exhibition period, the IAC will hold a directions hearing in mid to late September 2020, where the necessary arrangements and timetable for the public hearing will be established. The public hearing is expected to commence from mid October 2020.

Information on the hearing process and timetable will be published as it becomes available at: www.engage.vic.gov.au/crib-point-IAC

Members of the public and any other parties seeking to be heard at the public hearing are required to submit a written submission as outlined above and indicate that they would like to be heard at the hearing.

As a result of the current pandemic, the Minister has provided AGL and APA with amended procedures and requirements for the exhibition and inquiry phase of the Project. These state that the formal hearing would be conducted in the most practicable manner available under the prevailing circumstances and may include use of video conferencing or other comparable technology. Interested parties would be advised of this process closer to the date of the inquiry.

Following receipt of the inquiry report, the Minister for Planning will assess all relevant information including the EES documents, public submissions and the inquiry report. The Minister will then issue a written assessment of the Project's environmental effects, commonly known as the 'Minister's Assessment'. This assessment will recommend whether the Project's environmental effects are acceptable and set out any modifications or further management measures the Minister considers appropriate.

The Minister's Assessment must be considered by relevant Victorian statutory decision-makers responsible for determining key approvals for the Project.

The Commonwealth Minister for the Environment must also consider the Victorian Minister's assessment before deciding whether to grant approvals under the EPBC Act, and if so under what conditions.