

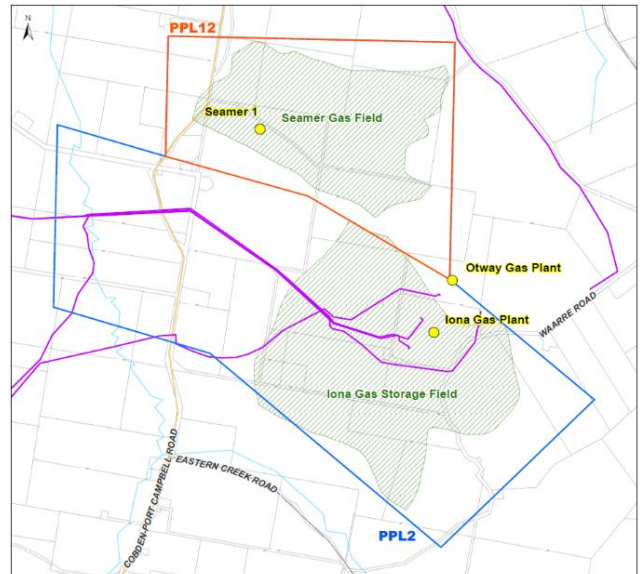
INTRODUCTION

This Notice of Operation provides information on the proposed petroleum operation – the Seamer 2 Project and the Seamer 2 Operation plan as required under section 161 (1A) of the Petroleum Act 1998 (Act) and section 23 of the Petroleum Regulations 2021 (Regulations).

WHAT IS AN OPERATION PLAN?

An operation plan is a document required under the Act in relation to a proposed petroleum operation. A plan identifies the risks that the operation may pose to the environment, to any member of the public and to land or property in the vicinity of the operation. It also identifies the risks to any petroleum, source of petroleum or reservoir in the vicinity of the operation.

A plan outlines what the holder of the authority (Lochard Energy) will do to eliminate or minimise those risks. It also specifies what the holder of the authority will do to rehabilitate land that will be



affected by the operation. A plan also sets out any other matters required by the regulations.

UPDATE

Please note that this Notice is an updated version to the Preliminary Notice of Operation issued by Lochard Energy in June 2021. Since that time the new draft Petroleum Regulations 2021 have been released and significant changes to the previous Preliminary Notice of Operation are highlighted.



Authority Holder Details: Lochard Energy (Iona Operations) Pty Ltd, Level 10, 2 Southbank Boulevard Victoria 3006 Petroleum Production Licences PPL2 & PPL12.

For more information or to contact Lochard: **By phone:** 1800 848 879

By email: info@lochardenergy.com.au **Or website:** www.lochardenergy.com.au

WHAT IS THE SEAMER 2 PROJECT?

Lochard Energy (Lochard) intends to increase the gas storage capacity of the Iona Gas Plant located near Port Campbell, Victoria by drilling a new gas storage well (named 'Seamer 2') into the Seamer Gas Field, an underground gas field located to the north of the Iona Gas Storage Field.

The Seamer 2 well will be connected to the existing Iona Gas Plant infrastructure, ultimately allowing gas to be stored within and extracted from the Seamer gas field and processed as required.

The Iona Gas Plant is a gas processing and compression plant which is connected to a series of underground storage reservoirs through a system of injection/withdrawal wells. Storing gas in the underground reservoirs allows Lochard to provide a consistent supply of gas to the Victorian and South Australian gas pipeline systems through the peaks and troughs of demand – that is, gas can be injected into the reservoirs and stored when demand on gas is low but for other times, like Winter, it can be withdrawn from storage, processed and distributed to the Victorian Gas Transmission System via the South West Pipeline and into South Australia via the SEAGas pipeline.

Existing gas storage wells accessing the Iona Gas Field have operated safely and successfully for over 20 years.

Lochard will shortly seek regulatory approval for the Seamer 2 Operation plan to undertake works required to drill and commission the Seamer 2 well. Information on the project can be found in this Notice of Proposed Operations. This Notice will be the final version if no further relevant changes are made to the Petroleum Regulations 2021.

WHAT DOES THE SEAMER 2 PROJECT INVOLVE?

Lochard employees located at the Iona Gas Plant and the Lochard head office in Melbourne will be directly involved in overseeing the project. Lochard has engaged a professional drilling contractor, Ensign, and third-party services that are appropriately skilled and qualified to manage drilling operations and associated works. The number of people at the site will vary according to the project stage. Peak numbers are expected to be during the drilling phase where up to 75 project personnel may be on site.

The Seamer 2 project location will occupy a



small area on the South Western boundary of the Iona Gas Plant site and comprise a



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drill pad and offices, and a drilling rig which stands approximately 50 metres high. The Seamer 2 project will utilise processes and equipment similar to those used for the drilling of the Iona 7 well in 2018.

The image on page 1, labelled 'Proposed Seamer 2 location', shows an example of the set-up that was used for the Iona 7 drilling project.

All drilling works will be completed within the existing Iona Gas Plant site. Portable offices to support the drilling operations will be located at the wellsite. The Project Rig Camp will provide accommodation and meal services to the project team. This will be established on Beach Energy-owned land on the south side of Waarre Road and to the east of the Iona Gas Plant.

A wellbore will be drilled directionally from the surface drill pad down to a vertical depth of approximately 1250 metres to intersect the Waarre sandstone within the existing Seamer gas field. When drilling is completed a 'Christmas tree' (as shown in the image on the right) will be installed on the wellhead and will be the only remaining visible well equipment. All other drilling equipment associated with the project will be removed.

This project will not involve hydraulic fracturing or 'fracking' techniques. Hydraulic fracturing is banned in Victoria.

WHEN IS THIS PLANNED TO HAPPEN?

We hope to obtain all required regulatory approvals for the project by the end of 2021, and for works to commence and complete within the first half of 2022.

Some construction for the gas plant upgrades will commence in October 2021 and will continue until project completion in May 2022. The drilling rig is expected to mobilise during January 2022 and be on location for a period of 6-8 weeks during January – March 2022.

The drilling rig will operate 24 hours a day, 7 days a week once drilling commences which we expect to be in early February 2022. Some flaring activities will occur over a 1 to 2-day period during daylight hours, following rig demobilisation.

Key stages of the project will be:

- Conducting civil works at the Iona Gas Plant to accommodate the drilling rig and associated equipment
- Establishing an accommodation camp in the vicinity of the Iona Gas Plant to accommodate the rig workers
- Drilling and completing one well from inside the existing Iona facility area, subject to regulatory approvals
- Well clean up and flow test
- Connecting the well into the existing Iona infrastructure
- Commissioning the new well to allow production activities to commence



Image above: "Christmas Tree"

The planned project schedule is:

- October 2021 - Commence civil works for Seamer 2 drill pad
- December 2021 - DJPR approval of Seamer 2 Well Operations Plan
- February 2022 – Drilling and complete Seamer 2
- April 2022 – Commission Seamer 2
- May 2022 – Final clean-up and test of Seamer 2 (through the Iona Gas Plant)

HEALTH, SAFETY AND ENVIRONMENTAL CONSIDERATIONS

Lochard is committed to supporting sustainable environmental practices and continually strives to ensure that it uses best practice approaches to health, safety

and the environment at the Iona Gas Plant and associated projects.

The Iona Gas Plant Safety Management System (SMS) and Iona Gas Plant Environment Management System (EMS) provide for the overarching management of health, safety and environment risks for the Iona Gas Plant and associated gas storage sites. The Seamer 2 project utilises these systems and will be conducted in accordance with relevant regulatory approvals.

An essential component of compliance is the identification of potential risks and impacts to the health and safety of personnel, contractors and the public and to the environment (including potential effects on the amenity of the local surroundings). Actions taken to reduce these risks and impacts as much as possible are built into the overall project approach. These are outlined in the Seamer 2 Drilling Operation Plan. This plan also includes a Well Operations Management Plan (WOMP) and an Environment Management Plan (EMP). There is a project specific Health, Safety, Environment Management Plan (HSEMP) which outlines HSE management expectations on aspects such as training, supervision, risk assessment and control, protective equipment and specific hazardous tasks.

A summary of potential environmental and social risks and impacts along with mitigating actions are provided in the table below.

Potential risk	Sources	Lochard Actions
Ground water contamination	Drilling from the surface down to the Waarre formation through aquifers/aquitards.	<ul style="list-style-type: none"> Steel casings are cemented in place from the bottom of the well to surface. Both casings and cement are pressure tested to ensure a strong seal. Monitoring of well integrity is ongoing once the well is established.
Increased traffic and heavy vehicles	Drilling rig mobilisation and demobilisation. Heavy vehicle movements. Local traffic between the personnel camp and drill site.	<ul style="list-style-type: none"> Lochard will advertise and advise regional and local residents of the increased traffic movements ahead of rig mobilisation. Activities will be conducted in accordance with the National Heavy Vehicle Regulator, VicRoads requirements and Lochard's Traffic Management Plan. All existing local traffic curfews will be adhered to for the project.
Excessive noise/vibration	Drilling operations and flaring. 24/7 operation when the drilling rig is utilised.	<ul style="list-style-type: none"> An ambient noise assessment of the drilling rig will be done before the project. Noise awareness training is to be conducted for rig crews. Limit high noise level periods. Flaring is to be undertaken during daylight hours. Noise monitoring during operations
Management of wastes	Wastes from the project are expected to be operational (such as drill cuttings and fluids, excess cement and	<ul style="list-style-type: none"> The generation of waste drill cuttings, fluids and excess cement will be minimised.

Potential risk	Sources	Lochard Actions
	prescribed wastes) and general waste from the office and personnel camp.	<ul style="list-style-type: none"> All waste will be captured onsite and disposed of in accordance with EPA requirements. Prescribed waste bins will be provided for hazardous materials or other contaminated waste that needs special treatment or disposal. Prescribed waste contractors will be Environment Protection Authority (EPA) licensed and approved as part of the Iona contractor management processes. Disposal of general and recyclable waste from the office and personnel camp will be through dedicated waste/recycling bins.
Land and surface water contamination	Sources include loss of well control, surface spills and spills from storage of hazardous materials	<ul style="list-style-type: none"> Storage of materials will comply with Lochard standards and requirements. The main storage will occur in existing compliant sites at the Iona Gas Plant facility. Temporary storage at the project site will be within bunded areas and quantities will be kept to a minimum.
Interruption of nearby land use	Drilling site or gathering line on neighbours' land.	<ul style="list-style-type: none"> Lochard will drill a deviated well from the Iona Gas Plant site to eliminate land impact on neighbour(s). No road closures are planned.
Excess lighting disturbing the amenity of the local surroundings	Flaring and lighting during night works.	<ul style="list-style-type: none"> Light during drilling operations is required to ensure a safe work place for the drilling operation teams. Flaring will be conducted during the day to minimise any resulting impacts to visual amenity.

Potential risk	Sources	Lochard Actions
Incident involving the transport of dangerous goods and hazardous materials	Hazardous materials could include diesel fuel, drilling materials, lubricants and maintenance/cleaning related chemicals.	<ul style="list-style-type: none"> Materials transported are checked for appropriate safety data sheets (SDS) and packaging requirements, and transported in accordance with legislation. Lochard only uses approved contractors and evaluates contractors to ensure compliance with the Australian Dangerous Goods Code.
Air/greenhouse gas emissions	Potential activities that may contribute to emissions include flaring, combustion of diesel and venting.	<ul style="list-style-type: none"> The highest emission activity will be during flaring operations. These will be minimised to the maximum extent possible. Emissions will be tracked and reported in accordance with regulations.
Impact on flora and fauna	Construction, operational or clearance works.	<ul style="list-style-type: none"> In 2019, Lochard undertook a flora and fauna study which determined no threatened or significant flora or fauna species within 5 km of the Iona Gas Plant. The project area lies within the existing Iona Gas Plant fenced area. The drilling rig will also be contained within an additional fenced area. The drilling rig will be within an existing cleared area. No areas will need to be cleared.
Disturbance of aboriginal and cultural heritage sites	Construction, operational or clearance works.	<ul style="list-style-type: none"> Aboriginal and cultural heritage values have been assessed previously at the Iona Gas Plant including an Environmental Effects Statement (EES) in January 1998 and a Cultural Heritage Survey (CHS) in 2019. These confirmed that there are no cultural artefacts or heritage overlays at the site. As work will not be conducted outside of this

Potential risk	Sources	Lochard Actions
		area there is no potential to cause disturbance.
Impact on visual amenity of surrounding area	The drilling rig will be visible while driving west along Waarre Road towards the Iona Gas Plant or from various vantage points on the Cobden-Port Campbell Road and at night.	<ul style="list-style-type: none"> • Lower level visual impacts are mitigated by natural land undulation and the tree screen around Iona Gas Plant site. • The drilling rig may be visible at night from the Great Ocean Road between Peterborough and Port Campbell.
COVID 19 safety		<ul style="list-style-type: none"> • Lochard has established a COVIDSafe Plan which provides an assessment of risks to health and hygiene at Lochard worksites and appropriate controls. It includes arrangements for increased health monitoring and hygiene practices. Safety rules govern the conduct of employees, contractors and visitors to Lochard sites. • Controls and their implementation for the Seamer 2 project are outlined in the project HSEMP. Lochard will continue to monitor and follow government advice.
Site rehabilitation		<ul style="list-style-type: none"> • The immediate drilling site within the Iona Gas Plant will be retained for the duration of the gas storage operations at Iona. • At the completion of gas storage operations, which is expected to be beyond 2040, the Seamer 2 well will be decommissioned, plugged with cement and the site rehabilitated in conjunction with the overall rehabilitation works for the Iona site and in accordance with all relevant regulatory requirements.

MORE INFORMATION ON KEY CONSIDERATIONS WHEN PLANNING FOR THE SEAMER 2 PROJECT ARE PROVIDED BELOW.

GROUND WATER AND AQUIFERS

Drilling down to the Waarre formation will require drilling through several aquitards and aquifers. The Port Campbell Limestone and Dilwyn Formation are important aquifers in the region, providing water for farmers and the domestic water supply for several towns. The deeper formations of the Pebble Point, Paaratte and Nullawarre Greensand are saline and not beneficial use aquifers at this location. The Waarre Formation, which contains the gas reservoir, is deeper at depths of 1,000 to 2,000 metres. The gas storage reservoir at Seamer 2 is at 1200 metres which is 650 metres below the Dilwyn aquifer and separated by three aquitards or sealing layers.

Lochard's drilling practices are designed to protect all of the aquifers and isolate them from one another. Steel casing lines the wellbore and is cemented in place from the bottom of the well to surface. Both casings and cement are pressure tested and electronically logged to ensure a lasting robust seal across all different underground formations. This technique has been used for the existing gas wells on site and will be used for the Seamer 2 project. Monitoring is ongoing once the well is established. Pressure and other testing is conducted on an ongoing basis

to ensure integrity of the well is maintained.

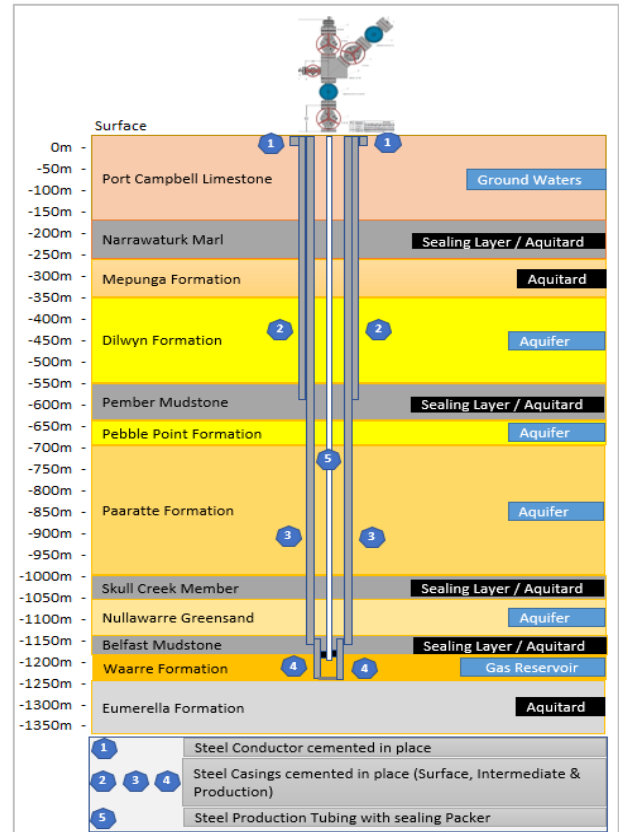


Image above: Diagram of drill designed to prevent contamination of underground water levels or "aquifers and aquitards".

TRAFFIC

The project will involve movement and utilisation of a drilling rig and a number of service providers to and from the project site. Drilling and operational works will involve a number of personnel and some heavy vehicle movements.

The drilling rig will be transported by truck to the site in January 2022. Drilling rig mobilisation and demobilisation phases are expected to last approximately two weeks each. There will be additional truck



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movements into and out of the site during February/March 2022. Lochard will advertise and advise regional and local residents of the increased traffic movements ahead of rig mobilisation.

To minimise the risk of incidents involving transport and public vehicles these activities will be conducted in accordance with the National Heavy Vehicle Regulator (NHVR), VicRoads requirements and Lochard's Traffic Management Plan which prioritise public safety and minimise disruption to the local community. All existing local traffic curfews will be adhered to for the project. The NHVR restricts rig movements during public holiday periods.

There will be some increase in traffic movement in the localised area. The location of the drilling rig camp means that the majority of traffic is contained within a small section of Waarre Road between the camp accommodation and the Iona Gas Plant project drill site.

NOISE

Initial civil construction works planned to commence in October 2021 are not expected to impact the community to any greater extent than normal operations. The drilling rig will be on location during January – March 2022 and will run 24 hours per day and contribute to higher noise than during normal operations.

The main sources of noise relate to operation of the diesel electricity

generation unit, heavy forklift movement and the occasional clanging of metal pipes. An ambient noise assessment on the drilling rig will be done before the project to determine if noise attenuation measures are required. Lochard will conduct a baseline noise assessment at the Iona Gas Plant prior to drilling activities and further noise monitoring during the drilling.

Following the drilling phase, the well will be tested, and some flaring of the gas will occur. Higher than normal noise will occur during flaring. Lochard will advise adjacent neighbours prior to this commencing and limit the duration to daylight hours over a 1 to 2-day period.

Community members are encouraged to contact Lochard during this period if they have concerns.

LAND AND SURFACE WATERS

The Iona Gas Plant is located within the Port Campbell Creek catchment. A series of water treatment processes are present on-site to capture and treat contaminants. A water testing program involving surface water sampling and analysis is conducted to ensure any contaminant issues are identified prior to off-site discharge.

The transport and storage of fuel and hazardous chemicals are controlled activities on-site and must be conducted in accordance with Lochard's procedures to



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reduce the potential of an incident releasing materials into the environment.

Spill kits compatible with the material being stored and handled will be available at each storage area. Personnel are trained to respond and clean-up spills in the event a spill or leak occurs in a bund or to ground. All releases are recorded by Lochard and reported to the regulator as required.

All equipment, fuel and chemicals associated with the project will be removed at the end of the drilling program.

TRADITIONAL CUSTODIANS

Lochard would like to respectfully acknowledge the Eastern Maar people, the Traditional Owners of the lands on which the Iona Gas Plant and the Seamer 2 project are located. "Eastern Maar" is a name adopted by the people who identify as Maar, Eastern Gunditjmara, Tjap Wurrung, Peek Whurrong, Kirrae Whurrung, Kuurn Kopan Noot and/or Yarro waetch (Tooram Tribe) amongst others.

Lochard acknowledges the cultural, spiritual, historical and ongoing connection to the country and would like to pay respect to their Elders past, present and emerging.

COMMUNITY INVESTMENT

In addition to Lochard's increased capacity to contribute to South East Australia's gas

EMERGENCY INCIDENTS

The Iona Gas Plant has an established Emergency Response Plan (ERP) and emergency response procedures. All personnel are trained to ensure they are aware of Iona Gas Plant's operating obligations and emergency arrangements.

In the unlikely event of an emergency, the systems, and processes in place at the Iona Gas Plant will apply to the Seamer 2 Project. An ERP Bridging document will be developed to cover any emergency scenarios or requirements unique to the project activities that are not covered by the existing ERP.

Lochard has a long-standing relationship with local emergency services and has worked to ensure they remain informed on work at Lochard facilities and upcoming projects such as the Seamer 2 Project.

and energy supply there are expected to be further benefits from the project, such as providing additional income streams to the Western Victorian region via the use of accommodation, food outlets, conference facilities, personnel hire and local services.

Lochard supports the ongoing employment of local people at the Iona Gas Plant (more than 50 people are directly employed at the Iona Gas Plant and live in the region) and by local businesses providing services including



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water, labour, catering, fencing, rubbish removal, security, cleaning, and flora and fauna experts.

IF YOU HAVE CONCERNS OR

KEEPING IN TOUCH

Lochard will continue to engage with local landowners, community members, councillors and government officials and are committed to keeping stakeholders informed of project activities and answer your questions.

The Iona Community Liaison Committee (CLC) meetings are the primary interface with community members and updates on Seamer 2 have been and will continue to be provided at this forum.

Newsletters and flyers will be provided to neighbours in advance of the drilling works commencing.

An online community information session was held on 14 September and is available for viewing at <https://www.lochardenergy.com.au/our-projects/>. Further sessions will be held as needed.

WANT MORE INFORMATION

Submissions concerning this Notice can be made in writing to Lochard Energy by 5 November 2021.

Submissions will be reviewed and considered from the date of receipt and replied to in the preparation of the Seamer 2 Drilling Operation Plan.

Please address your submission to:

By mail:

Seamer 2 Operation Plan Submission,
Iona Gas Plant,
245 Waarre Road,
Port Campbell, VIC, 3269

By email: info@lochardenergy.com.au

For general project inquiries, updates or to speak with the project team:

Project Team Representative: Rod Harris

By phone: 1800 848 879

By email: info@lochardenergy.com.au

Or website: www.lochardenergy.com.au