

Refinery Pier extension works



Project overview

Viva Energy is seeking approval to build a floating gas terminal adjacent to the Geelong Refinery in Victoria. The new LNG import terminal would provide a reliable new supply of natural gas for south-east Australia, helping to meet gas shortages forecast in coming years.

The proposal includes an extension to the existing Refinery Pier in Corio Bay, where a floating gas terminal would be continuously moored on a new shipping berth. LNG would be shipped to Geelong Port, with LNG carriers docking next to the terminal. LNG would be unloaded into the floating gas terminal, stored in liquid form and, when needed, converted to gas on board ("regasification"), before being sent to customers via pipeline.

Viva Energy is an experienced operator of Major Hazard Facilities, and has safely operated the Geelong Refinery and Refinery Pier for almost 70 years. Construction work for the pier extension and Floating Gas Terminal berth would take place adjacent to the Refinery within an industrial area and busy port.

Pier construction works

The pier extension will be approximately 570 metres long (similar to existing pier arms) located to the north-east of Refinery Pier. Construction work would take 18 – 22 months and is planned to commence in late 2022, once all required permits and approvals were received.

While the works would take place in an existing industrial area with a separation distance of at least 1.2 km to the closest residential areas, we are committed to identifying and mitigating any potential impacts to the marine environment, port operations and the local community.

New infrastructure planned on the pier includes marine loading arms and control systems, fire-fighting equipment, a walkway and a separate gangway tower for access to the Floating Gas Terminal.

Ports Victoria is responsible for ensuring ships can safely navigate Victorian shipping channels, berths and ports. They monitor water depth and conduct regular maintenance dredging in Corio Bay to ensure safe access for the 1000+ ships projected to visit Geelong Port each year.

Detailed assessments and careful planning

Extensive planning is underway to minimise impacts of the pier and port works to the environment and the community.

A comprehensive environment effects statement (EES) is being prepared by Viva Energy, with input from external experts. The EES will look at all potential environmental impacts of the project, including technical studies and assessments of the marine environment around Refinery Pier and the nearby dredging site.

Mitigation measures will be developed as required to eliminate or reduce potential impacts of the pier extension during project design, construction and operation. We will work closely with Ports Victoria and other authorities as we proceed with our plans.

Deeper water for safe ship berthing

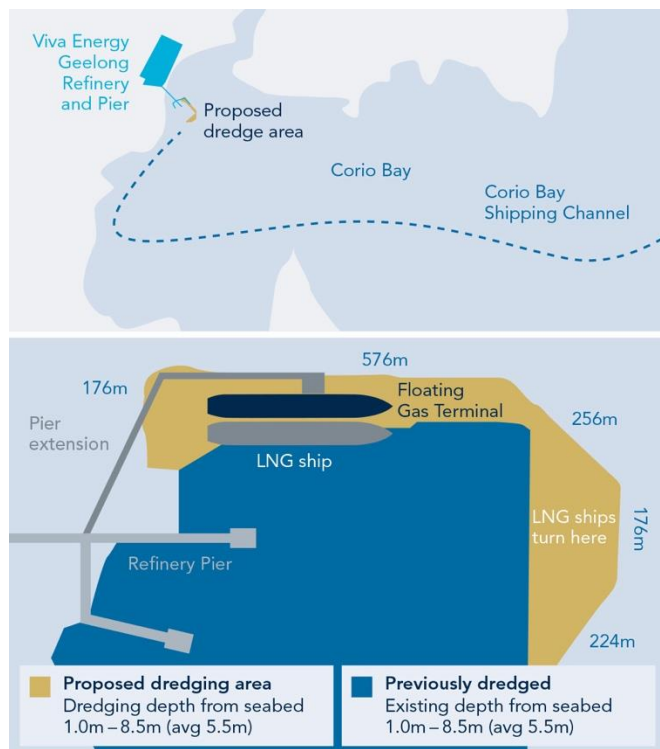
Localised dredging would be carried out to accommodate the new berth and safe ship turning for larger ships. An existing dredged area close to Refinery Pier would be extended and sediment removed from the seabed, then taken by barge to an approved disposal site, likely Point Wilson.

Ports Victoria is responsible for ensuring safe and efficient navigation of vessels through Victorian shipping channels. Dredging is a routine part of port operations/maintenance, and would be carefully planned and executed in conjunction with GeelongPort and Ports Victoria.

A comparable dredging program carried out by the Victorian Channel Authority (now Ports Victoria) in 2015/16 took place about 150m from Refinery Pier No 4 while all berths were in operation, and was conducted safely and without incident.

Detailed technical studies have already begun to inform the plans for the dredging program, so we can minimise the impacts from dredging and sediment disposal on the local marine environment

The area to be dredged is a small part of the total area of Corio Bay. Our proposal would not require any dredging of the shipping channel. LNG ships would travel along the existing Port of Geelong shipping channel.



If you have any questions or feedback please contact us on:

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Minimising impacts to the marine environment

EES technical assessments will examine all potential impacts resulting from construction activity and dredging, including impacts from sediment movement. The area to be dredged is muddy seabed, and temporary sediment in the water column (turbidity) is expected in and near the dredging operations, and at the spoil disposal area.

Protecting marine life

The EES will study the potential impacts on water quality from temporary sediment mobilisation. We will look at how far sediments are likely to move under different conditions, and what impacts this might have on local marine life.

It is not anticipated that construction of the Refinery Pier extension or the proposed dredging will have unacceptable impacts on marine life. Based on studies of previous dredging in Corio Bay, we expect that sediments mobilised into the water would be short lived and localised, assisted by the low currents experienced in Corio Bay. This will be confirmed by modelling under the EES process.

Water and seabed testing is being undertaken at a number of locations throughout Corio Bay, the dredging site and Point Wilson (as the potential disposal site for dredged spoil). Monitoring programs are already underway, including data collection on currents and sampling of plankton and larvae in Corio Bay.

Mobile species such as fish will tend to avoid the dredging area while works are underway, as they do with normal shipping activity in the bay.

Contaminants in seabed sediment

As we would be removing sediment from an area which has been in industrial use for many years, it is likely that dredging activity could disturb contaminated seabed material. We are planning and preparing for this contingency, with the advice of experts from a wide range of Government agencies, and will have plans in place for the proper handling and disposal of any contaminated material.

Testing and assessment of the seabed is already underway to identify exactly what we would be digging up, inform our planning process, and ensure we mitigate any possible impacts to the marine environment.

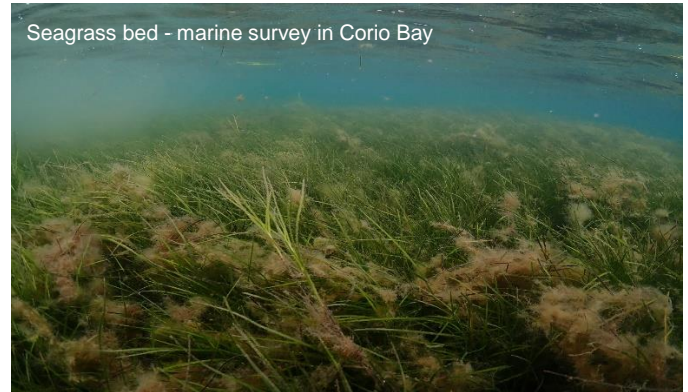
Ramsar wetlands

The Port Philip Ramsar site is a sensitive wetlands area that supports large populations of migratory birds. Located 1.3 km from the proposed terminal at the closest point, the project team has identified the Ramsar site as a priority watch point.

The proposed terminal will not be built inside the designated Ramsar site and its bird life habitat will not be directly impacted by construction works or dredging activity. However, the EES is a thorough process which will examine the potential for both direct and indirect impacts, including from dredging and resulting sediment movement. Expert assessments will be conducted to ensure there are no unintended indirect impacts on birds, or the food stocks needed to support the bird population.

Seagrass

Seagrass beds are recognised as an important habitat and will be closely monitored. Previous studies in Corio Bay following dredging of similar or larger quantities of sediments found little or no impact on seagrass beds, even where they were close to the dredging activity.



Seagrass bed - marine survey in Corio Bay

Access for fishing

Recreational fishing will be restricted around the Refinery Pier work site, including the dredging zone once dredging operations are underway. However the impacted area represents just a small percentage of Corio Bay, and is located in an already-busy part of the Port which is a restricted-access zone.

Studies of previous programs show that marine life recolonises the seabed shortly after the dredging has finished.

Disposing of dredged material

The current plan is to transport the dredged sediment by barge and deposit the dredged material within the existing spoil ground at Point Wilson.

However, we are currently undertaking an assessment of spoil disposal options. Once testing has determined the nature of the material to be dredged, an appropriate management plan including a suitable disposal site would be agreed with regulators.

The dredging plan will only be approved when it meets all necessary requirements to describe how the environmental standards expected by the community would be met.

Refinery Pier works

A proposed extension to the existing Refinery Pier and some localised dredging would be required to allow the LNG ships to safely berth and turn into position. The proposed dredge volume is about 490,000m³. The area to be dredged is about one percent of the Corio Bay Channel or five per-cent of the refinery footprint. This is relatively small in comparison to some other dredging projects.

Gas Terminal Project
estimated dredge quantity
~490,000m³

VRCA Corio Bay Channel
Improvement Program 1997
4,500,000m³

Port of Melbourne Channel
Deepening project 2008/9
23,000,000m³

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