

Executive Summary

The Proponent

The proponent for the Longtom Field Development is Nexus Energy Limited (Nexus).

Nexus operates the Longtom Field within production permit VIC/L29. Nexus is an international oil and gas company with its headquarters in Melbourne, and was publicly listed on the Australian Stock Exchange and began trading in August 2001. The core business of the company is oil and gas exploration and production. Nexus also has exploration and production interests in the Northern Territory and Western Australia.

The Proposal

Nexus Energy Limited (Nexus) is proposing to produce gas from the Longtom Field Development (hereafter referred to as 'the project'), which is located approximately 31 km offshore from Orbost on Victoria's eastern coast. The Longtom field lies approximately 28 km east-northeast of the Snapper field, 12.5 km northwest of the Tuna field, 17 km northeast of the Marlin field and 16 km southwest of the Patricia Baleen field, in the exploration permit VIC/P54 (Figure ES1).

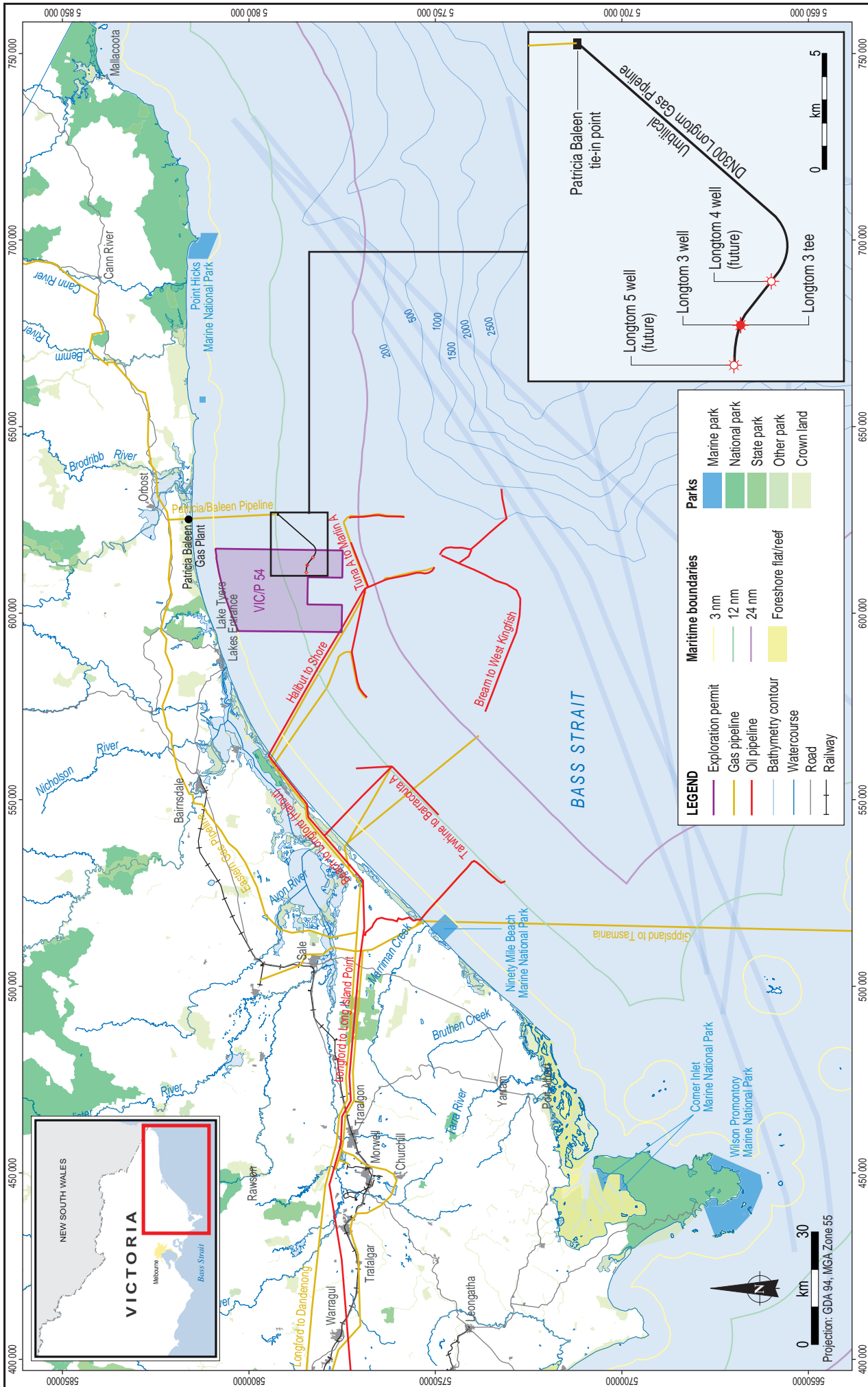
The Longtom gas field was discovered in June 1995. A conditional gas contract has been negotiated with Santos. Nexus has booked 350 PJ of sales gas and 4 MMbbls of condensate as reserves for the Longtom Field.

The Longtom Field Development is shown schematically in Figure ES2. The project consists of the following main components:

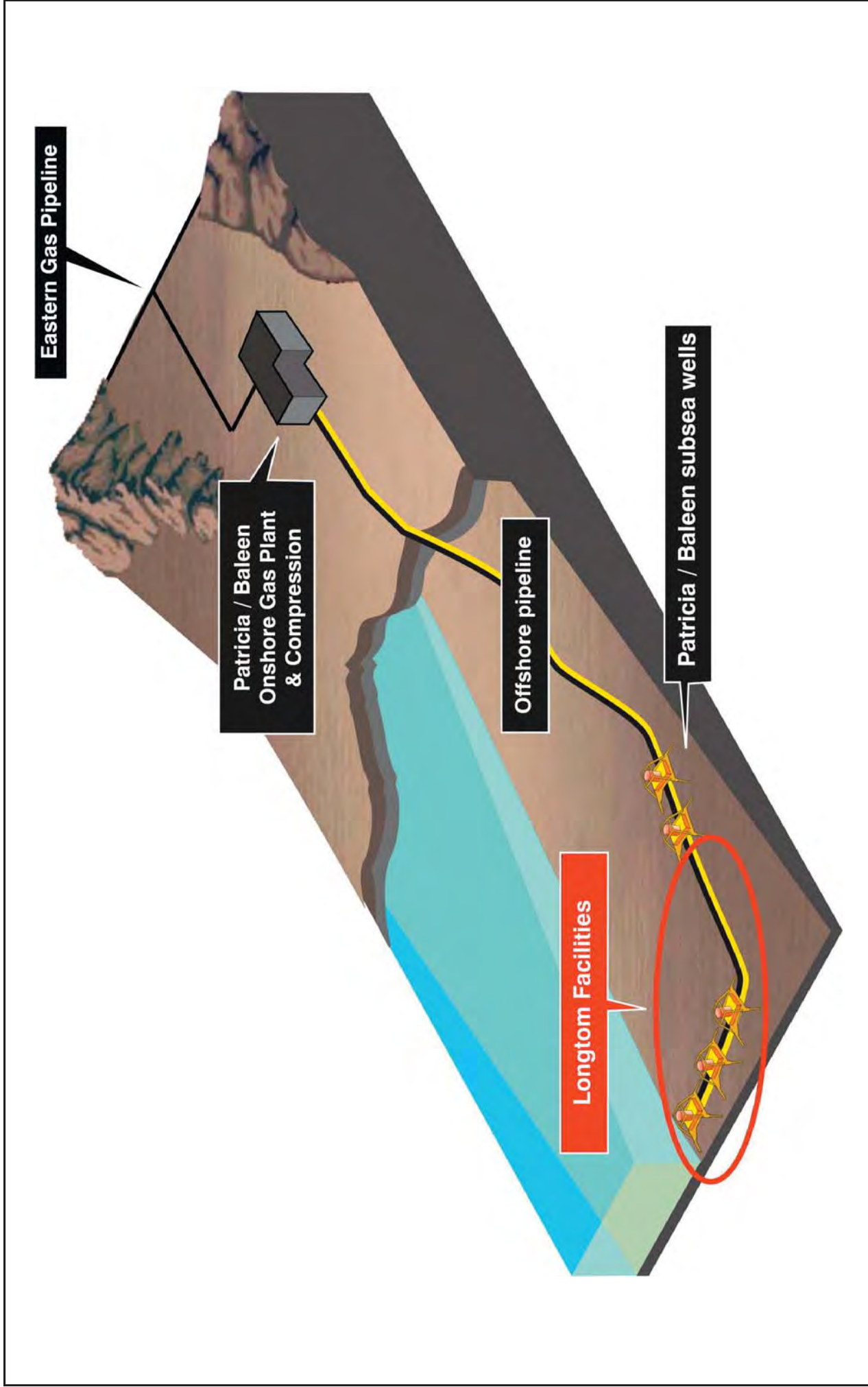
- 3 subsea wells and production trees in water depths of approximately 51–57 m.
- 19 km offshore pipeline connecting the subsea wells to the Patricia Baleen offshore gas pipeline.
- High integrity pressure protection system (HIPPS).
- Control umbilicals.



Longtom gas will flow to shore via a new high-pressure pipeline tied back into the existing, lower pressure Patricia Baleen (PB) offshore gas pipeline, and then to the Patricia Baleen gas plant, operated by Santos.

The Patricia-2 and Baleen-4 wells have a low shut-in pressure and will be unable to produce when the Longtom field is in production.



Job No:	1237	Nexus Energy Limited		Location of project	
File No:	1237_03_FES1_HB	Longtom Field Development		ES1	



	Job No: 1237 File No: 1237_03_FES2_FT	Nexus Energy Limited Longtom Field Development		Longtom Field Development - schematic	Figure No: ES2
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- A high integrity pressure protection system will protect the Patricia Baleen pipeline from overpressure.
- The Longtom pipeline has been designed to ensure it is not at risk from fishing activities.
- The control umbilical will be trenched below natural seabed levels to protect from damage by fishing activities.
- The location of wellheads is remote from shore.
- Critical function testing of the subsurface safety valve and pipeline pressure protection system will be undertaken regularly.
- A 500-m permanent exclusion zone will be established around each well head and marked on maritime charts, with positions also made available electronically to fishing vessel owners/operators.
- The as built pipeline and umbilical locations will be advised to the maritime authorities and will be made available electronically to fishing vessel owners/operators.
- Wellhead locations will be marked with navigation warning buoys.
- The exclusion zone around wellheads is a very small percentage of the total fishing grounds in eastern Bass Strait.
- Consultation with commercial fishing groups will re-occur before construction to inform them of the final pipeline and well head locations.

In summary, the Longtom Field Development proposed by Nexus will not result in detrimental impacts to populations of marine fauna or commercial fisheries in the vicinity of the project area. Detailed management and mitigation measures that will be followed during the project are provided in this EP.

Santos will upgrade the Patricia Baleen Gas Plant to allow extraction of the condensate from Longtom gas and meet gas pipeline specifications prior to purchasing the gas from Nexus and for on-sale via the Eastern Gas Pipeline. Approvals and issues associated with the onshore plant will be addressed by Santos and are not part of this Environment Plan.

The scope of work for the project can be divided into the offshore works (Nexus responsibility) and the Patricia Baleen Gas Plant upgrade works (Santos responsibility). The upgrading of the Patricia Baleen Gas Plant is described briefly in this section, as the environmental assessment and approvals for this work will be addressed by Santos.

The offshore works are addressed in this Environment Plan (EP) and include:

- Installation of a 19 km DN300 carbon steel pipeline from the Longtom wells to the upstream end of the existing Patricia Baleen pipeline.
- Installation of a HIPPS system to protect the PB pipeline against overpressure from the new Longtom wells.
- Installation of a 20 km umbilical to extend the existing hydraulic, electrical and chemical services to the new Longtom wells.

The Longtom Pipeline will be installed by the pipeline lay barge "Aussie 1", operated by Trident Australasia Pty Ltd. The Trident head office is in Perth, Australia and branch offices are in Singapore and Dehli, India. Trident is a growing provider of offshore and onshore development services for the oil, gas and water resources industries. The lay barge proposed is a new-build (100% Australian owned) multipurpose anchored side-lay Pipelay and Accommodation barge.

Nexus have a pipeline licence, an accepted pipeline management plan and will applying for consent to construct in September 2008. The pipelay barge is due to arrive in location early November 2008 with construction expected to last approximately 2 months.

Stakeholder Consultation

In the course of planning the project and developing the project, Nexus has, either directly or through their specialist consultants, undertaken consultation with relevant stakeholders to identify potential environmental issues and management requirements. Stakeholders consulted have included:

- Commonwealth Government:
 - Australian Fisheries Management Authority.
 - Department of Environment and Heritage (Referrals section).
 - Department of Industry, Tourism and Resources.
 - Department of Transport and Regional Services.
 - National Offshore Petroleum Safety Authority.
- Victorian Government:
 - Department of Primary Industries.

- Fisheries Division (Melbourne).
- Minerals and Petroleum Division (Melbourne).
- Regional Office (Bairnsdale).
- Commercial Fishing:
 - Commonwealth Fisheries Association.
 - Lakes Entrance Fishermens' Coop.
 - Lakes Entrance Scallop Fishing Industry Association.
 - Victorian Scallops Industry Association.
 - San Remo Fishermen's Coop.
 - South East Fishery Association.
 - South East Trawl Fishing Association.
 - Seafood Industry Victoria.
 - Tasmanian Fish Industry Council.
- Recreational fishing:
 - Victorian Recreational Fishing.

None of the organisations or persons consulted raised any significant issues regarding the project. Most of the organisations were pleased to receive the information and advised that they would like to receive further information prior to the installation phase as a reminder of activities.

Environmental Impact Assessment, Management and Mitigation

Referral and assessment of the Longtom Field Development under the EPBC Act by the DEH determined on 23 October 2006 that the project was not a 'controlled action'.

The following impacts are potentially associated with the construction and operation of the project:

- Physical effects to marine ecological communities and habitat.
- Chemical effects from discharges during construction and operation.
- Increased underwater noise levels.
- Disturbance to commercial fishing activity.
- Hydrocarbon spills during construction and operations

The Environment Plan provides a detailed assessment of potential impacts during construction, commissioning and operation of the project. The salient points of the assessment, and management and mitigation measures for them, are summarised below.

Construction

Impact Assessment

- Impacts to the seabed and epifauna will be restricted to the area along the pipeline route. The extent of impact will be limited to that directly underneath the pipeline and the localised area beneath and to either side of the umbilical (due to trenching) and

underneath anchors and anchor wires on the seabed during the pipe lay and are transient.

- No direct impacts will occur to fish and other mobile fauna.
- There is the potential for a once-off discharge of hydrocarbon residue (less than 500 litres of oily water mixture) from the Patricia Baleen pipeline when the end flange is removed to tie in the Longtom pipeline.
- There may be a very small, localised and temporary increase in nutrient content in the water column due to discharge of sewage and putrescible wastes.
- Small volumes of solid and hazardous wastes will be appropriately disposed onshore with minimal environmental risk.
- Procedures will be put in place to ensure very low risk of significant hydrocarbon spill.
- The pipelay vessel will be a “new build” and will therefore be free of marine fouling organisms on the hull.
- There may be temporary and localised low noise risk to marine animals.
- The project area is located in an area of low to medium trawl fishing activity.
- Temporary exclusion from commercial fishing activity around the pipe lay, umbilical installation and diving support vessels.

Management and Mitigation

- Most of the 19 km pipeline seabed route is sand, with limited emergent fauna and flora.
- There is likely to be some colonisation of exposed hard surfaces of wellheads and structures by epifauna such as sponges, hydrozoans, bryozoans and algae.
- Petroleum (Submerged Lands) Act 1967 clauses relating to waste disposal of sewage and food scraps revoked in March 2006 will be adhered to as an ‘internal standard’.
- All hazardous materials will be stored in appropriately bunded areas (and away from exposure to rain and deck wash) and Material Safety Data Sheets for all these chemicals will be stored at a known location on the vessel.
- Hazardous wastes will be segregated and stored in sealed storage areas and transferred to onshore licensed hazardous material handlers for disposal to a licensed depot.
- No incineration of waste will be conducted. Solid waste will also be disposed of onshore.
- A survey will be undertaken to ensure no junk or debris is left on the seabed.

- Strict refuelling and operations procedures will be in place.
- All spills will be recorded in a wastes and emissions log, reported to Nexus and regulatory authorities will be advised in accordance with regulatory requirements.
- Pipelay and support vessels will not take on, or discharge ballast water.
- A whale interaction management plan will be followed by all vessel contractors and aircraft.
- A temporary 500-m exclusion zone will be in place around the pipelay and support vessels.

Commissioning

Impact Assessment

- No impacts to marine ecology are expected from the discharge of hydrotest water and commissioning chemicals.

Management and Mitigation

- Hydrostatic test water released offshore (or discharged to the Patricia Baleen Gas Plant holding pond) will occur as a once-off activity.
- Chemical additives have been selected with environmental considerations assessed and reviewed.

Operations

Impact Assessment

- Operation of subsea infrastructure will have no adverse impact to marine ecology.
- Potential for rupture of pipeline is extremely low.
- Gas will contain virtually no produced formation water and any water of condensation will be treated onshore.
- Potential for accidental hydrocarbon spill is very low, with a low potential of beaching of any spilled oil on the Victorian coastline.
- Maintenance activity (if required) will be restricted to small areas of operation and likely to be of very short duration.
- Project area is not located in an area of frequent scallop recruitment and scallop fishing.
- Exclusion of commercial fishing around wellheads will be a total area of approximately 2.4 km².

Management and Mitigation

- Very occasional small volumes of hydraulic valve fluid are discharged, but are non-toxic and will rapidly dissolve in seawater.
- A high integrity pressure protection system will protect the Patricia Baleen pipeline from overpressure.
- The Longtom pipeline has been designed to ensure it is not at risk from fishing activities.
- The control umbilical will be trenched below natural seabed levels to protect from damage by fishing activities.
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- A 500-m permanent exclusion zone will be established around each well head and marked on maritime charts, with positions also made available electronically to fishing vessel owners/operators.
- The as built pipeline and umbilical locations will be advised to the maritime authorities and will be made available electronically to fishing vessel owners/operators.
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