VERMILION ENERGY

INFORMATION SHEET

Wandoo Field

Wandoo Facility Environment Plan

October 2025

About Vermilion Energy

Vermilion Energy is an international energy producer with a 30-year track record. It has operations in North America, Europe and Australia.

Vermilion Oil and Gas Australia (Vermilion) is a subsidiary of Vermilion Energy and has operated in Australia for 20 years. Our Australian operations focus on producing and developing oil at the Wandoo Field, off the shore of Western Australia.

About Wandoo Field

The Wandoo Field was discovered in 1991 and the extraction of oil started in 1993. Vermilion has been the operator since November 2005 and the sole titleholder since 2007.

The Wandoo Field is located within the Permit Area WA-14-L in Commonwealth waters within the Carnarvon Basin, approximately 80 km northwest of the port of Dampier and 110 km northeast of Barrow Island (**Figure 1**). The water depth at the field location is in the range from 50–60 m.

Operational Area

The Operational Area for the activities detailed in the Wandoo Facility Environment Plan (EP) is defined as the area within the existing 500 m Petroleum Safety Zone (PSZ) within the Permit Area of WA-14-L, surrounding the Wandoo Production Facilities (see **Table 1**).

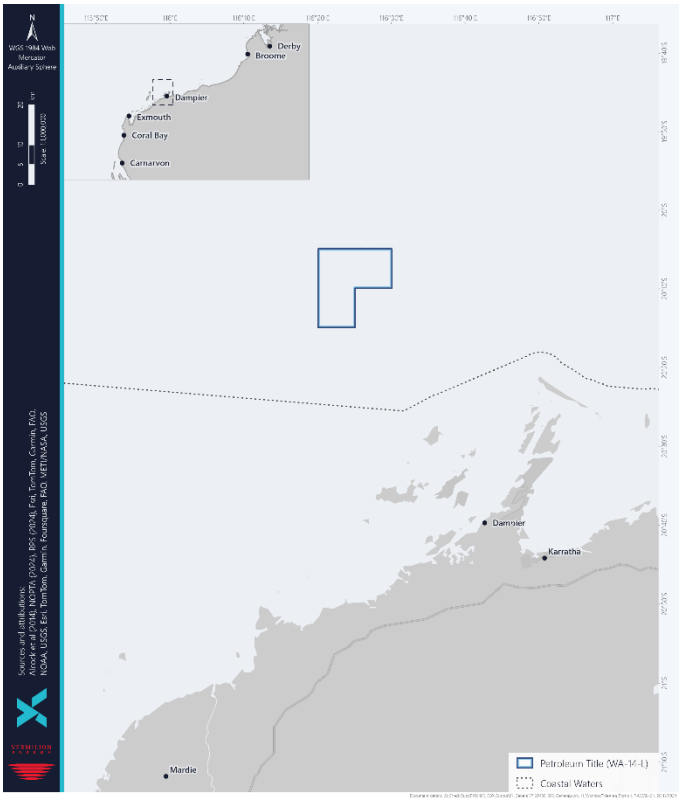

Figure 1. Location of WA-14-L

Activity overview

The Wandoo Field currently operates under an approved EP for production at the facility. The Wandoo Facility EP is updated and reassessed every 5 years, as per Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023.

Vermilion currently operates the Wandoo Facility within the production licence area WA-14-L under the Wandoo Facility EP. The purpose of this EP is to document the potential environmental impacts and risks and planned mitigation measures associated with the operation of the Wandoo Production Facilities. This EP is limited to the hydrocarbon well production, process, storage and export activities, and supporting operations and maintenance activities conducted within the Wandoo Field.

The well fluids produced from Wandoo A are piped to the Wandoo B platform. After treatment, the oil is stored in the concrete gravity structure and then, when sufficient volumes are available, offloaded through flexible flowlines to a Catenary Anchor Leg Mooring Buoy (CALM Buoy) located 1.2 km north of the Wandoo B platform (see **Figure 2**). A floating hose is used to transfer the oil from the CALM Buoy to export tankers situated at the mooring facility. Export tankers are used to offload the oil.

Total field production is currently in the order of 5,000 bbls/day.

Pictured: Wandoo Production Facilities, Wandoo A (left) and Wandoo B (right)

Produced Formation Water

Like all offshore oil platforms, the Wandoo Production Facility recovers fluids that are then treated to remove water, known as Produced Formation Water (PFW). Once the oil and water have been separated, the PFW is treated to further maximise oil recovery, before being discharged to the ocean. This is standard industry practice and is done in line with the accepted Wandoo Facility Environment Plan, which meets the requirements of the offshore environmental regulations.

Wandoo may discharge up to 36,000 m^3/day of PFW into the ocean. Over the years, it has been extensively analysed and found to contain trace quantities of organic compounds (liquid hydrocarbons), dissolved and suspended salts and minerals from the reservoir (heavy metals, ammonia) and production process chemicals.

Vermilion has undertaken extensive research to improve the performance of the water treatment system and reduce the concentration of hydrocarbons in the PFW discharge. Sensitivity analysis confirms this provides a more effective environmental impact reduction compared to other solutions such as reinjection back into the reservoir.

On discharge to the ocean, the PFW is diluted rapidly, however, it can cause a visible plume on the ocean surface, particularly on calm days. Dilution reduces hydrocarbons concentrations to levels below which they could possibly cause environmental harm. Over a longer timeframe hydrocarbons are reduced to their constituent parts through microbial biodegradation and will not accumulate in the environment.

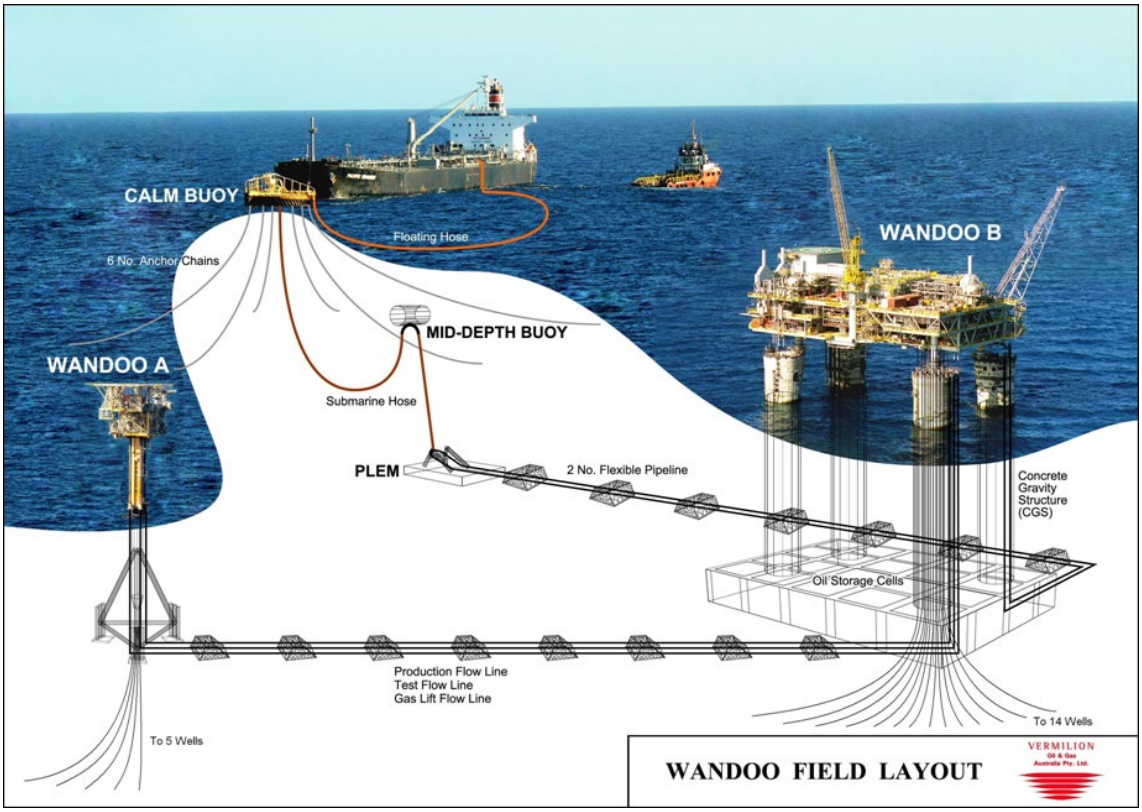

Figure 2. Schematic of the Wandoo Production

Table 1. Coordinates of the Wandoo Production Facilities (GDA2020/MGA2020)

Facility	Latitude	Longitude
Wandoo A	20° 08′ 14.61″ S	116° 25′ 22.43″ E
Wandoo B	20° 07′ 37.12″ S	116° 26′ 08.23″ E
CALM Buoy	20° 06′ 57.43″ S	116° 26′ 06.51″ E

Communications with mariners

A 500 m PSZ applies around the Wandoo Production Facilities. Commercial fishers and other marine users are not permitted to enter the Operational Area.

Environment that may be affected

As part of our environmental assessment and consultation process, Vermilion create an environment that may be affected (EMBA) map to provide geographical context for stakeholders to determine if their functions, interests or activities may be affected by an offshore activity during operations or in an emergency scenario.

Figure 3 shows the EMBA, which is based on a worst-case environmental scenario, which in this case is an unplanned release (oil spill) from the Wandoo Production Facility.

The EMBA has been defined through combining 100 simulations for each unplanned release scenario under different weather and ocean conditions. This means that in the highly unlikely event an unplanned release does occur, a geographical area much smaller than the EMBA would be affected.

The majority of the impacts or risks directly arising from planned activities would occur within close proximity of the operational area.

Vermilion has systematic control measures to prevent and mitigate emergencies and to reduce the impact of planned activities on the environment, including ecological, social and cultural sensitivities.

Tables 2 and **3** summarises the key impacts or risks and proposed control measures to manage these to levels that are as low as reasonably practicable (ALARP) and acceptable.

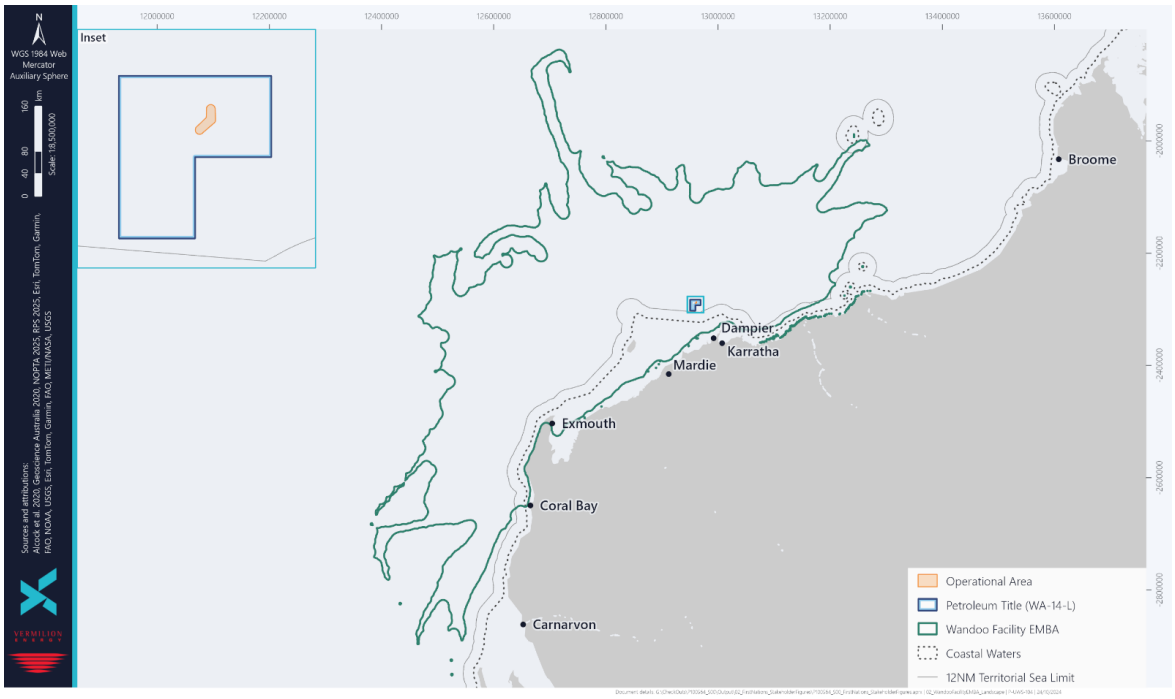

Figure 3. Operational area and environment that may be affected

Assessment

Vermilion has undertaken an assessment of the potential impacts and risks to the environment as well as potential risks to relevant persons arising from the planned activities and unplanned events. This assessment considers the timing, duration and location of the activities. A number of mitigation and management measures will be implemented and are summarised in **Tables 2** and **3**. Further details will be provided in the Wandoo Facility EP.

In preparing the EP, Vermilion's intent is to minimise environmental, social and cultural risks and impacts associated with the proposed activities, and Vermilion seeks your feedback to inform our decision making.

Mitigation and management measures

Vermilion has undertaken an assessment to identify potential impacts and risks to the environment arising from the activity. A number of mitigation and management measures for the activity are outlined in **Tables 2** and **3.** Further details will be provided in the Wandoo Facility EP.

Table 2. Summary of key risks and/or impacts and preliminary management measures

Potential impact/risk	Source of potential impact/risk	Description of potential impact/risk	Preliminary draft mitigation and/or management measure
Planned activities (routine and non-routine)			
Light emissions	Wandoo Production Facilities and support vessels	• Navigation and operational lighting from the operational area may result in a localised change in ambient light. • Change in ambient light may result in the temporary attraction or deterrence of light-sensitive species.	• Potential impacts from lighting are assessed as occurring within 20 km of a vessel or facility based on the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2019). • Facility and vessel navigation lights are compliant with the *Navigation Act 2012*.
Acoustic emissions	Wandoo Production Facilities, support vessels and helicopters	• Offshore activities within the operational area may result in a localised and temporary change to ambient underwater sound.	• Vessels and helicopters comply with relevant parts of Environment Protection and Biodiversity Conservation (EPBC) Regulation (2000) Part 8. • Vessel and machinery are maintained in accordance with Flag State certification requirements. • All engines, compressors and machinery on the facilities are maintained via a maintenance management system.
Atmospheric and greenhouse gas emissions	Wandoo Production Facilities, support vessels and helicopters	• Combustion of fuel may result in a localised and temporary reduction in air quality. • Greenhouse gas emissions within the operational area may result in contribution to the reduction of the global atmospheric carbon budget.	• Reduced sulphur content fuel will be used. • Flag State Certificate and/or IAPP certifies measures are in place to manage air emissions. • All engines, compressors and machinery on the facilities are maintained via a maintenance management system.
Routine discharges	Wandoo Production Facilities and support vessels	• Planned discharges from operations (e.g. sewage, food waste) may result in a localised and temporary change in water and/or sediment quality, and subsequent impacts to marine life.	• Emissions and discharges of liquid waste to sea are in accordance with legislative requirements. • Compliance with Vermilion Waste Management Plan. • Produced water discharges are monitored and recorded, with adaptive management processes applied if significant changes are identified.
Discharge of produced water	Wandoo Production Facilities	• Planned discharges from operations (e.g. sewage, food waste, produced water) may result in a localised and temporary change in water and/or sediment quality, and subsequent impacts to marine life.	• Routine external laboratory testing to ensure produced water chemistry is within assumed levels. • Produced water discharge flow rates are monitored. • Oil in water concentrations are monitored and alarmed. • Compliance with chemical assessment and selection process.

Potential impact/risk	Source of potential impact/risk	Description of potential impact/risk	Preliminary draft mitigation and/or management measure
Interaction with other marine users	Wandoo Production Facilities and support vessels	• Potential displacement of commercial fishing activities and commercial shipping vessels.	• A pre-existing 500 m PSZ is in place around the Wandoo Production Facilities and will remain in place for Wandoo Production Facilities the duration of operations under the proposed EP. No vessels are to enter this zone. • Consultation is undertaken with all relevant persons.
Disturbance to seabed	Wandoo Production Facilities	• Localised increase in turbidity. • Potential impacts to benthic habitat and communities.	• Seabed disturbance limited to planned activities and defined locations.

Table 3. Summary of potential risks and management measures associated with unplanned events

Potential risk	Source of potential risk	Description of potential risk	Preliminary draft mitigation and/or management measure
Unplanned events (accidents/incidents)			
Unplanned release from wells	Production wells	• A release of hydrocarbons (e.g. oil, fuel) may result in marine pollution, change to water quality, smothering of subtidal and intertidal habitats and subsequent impacts to marine life, indirect impacts to fisheries, and reduction in amenity.	• Well control shall be maintained at all times during well construction and intervention operations. • Well Control and Pressure Control Equipment shall be appropriate for providing control of the well. • Casing and other well equipment shall be designed to contain any anticipated pressure during the lifecycle of the well.
Unplanned release from export system	Offtake tanker station keeping failure or failure of floating hose assembly		• Structural integrity of CALM Buoy mooring. • Weather restrictions apply to offtake activities. • Wandoo Mooring Master on board tanker during offtake. • Marine breakaway coupling on floating hose assembly.
Unplanned release from Wandoo B shaft 2	Structural damage to shaft 2		• Asset integrity management. • Management of change processes for changes to structural loading. • Structural design of the Wandoo B facility.
Unplanned release from vessel collision	Support vessels		• Wandoo Production Facilities are marked on marine charts and any changes notified via Notices to Mariners. • 500 m PSZ surrounding the Wandoo Production Facilities. • Vessel operations restricted in adverse weather. • Dynamic positioning requirements. • Navigation aids. • Emergency communications.
Invasive marine pests	Support vessels	• Planned discharge of ballast water or the presence of biofouling on vessels may result in the introduction of an invasive marine pest.	Support vessels will comply with: • Australian Ballast Water Management Requirements consistent with the International Convention for the Control and Management of Ships' Ballast Water and

Potential risk	Source of potential risk	Description of potential risk	Preliminary draft mitigation and/or management measure
			Sediments (Ballast Water Management Convention). • Annex 1 of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships. • National Biofouling Guidelines for the Petroleum Production and Exploration Industry and IMO Guidelines for the control and management of a ship's biofouling to minimise the transfer of invasive aquatic species.
Vessel collision or disturbance of fauna	Support vessels	• Potential injury of marine fauna.	• Vessels contracted by Vermilion operating in the Operational Areas must have procedures that adhere to Part 8 of EPBC Regulation 2000 to minimise exposure of marine fauna.
Unplanned release during handling/ storage of hazardous materials or wastes	Wandoo Production Facilities and support vessels	• A release of hazardous material or waste (e.g. fuel, sewage) may result in change to water quality, marine pollution and subsequent impacts to marine fauna, potentially resulting in injury or mortality.	Work procedures for lifts, bulk transfers and cargo loading will require: • The security of loads to be checked prior to commencing lifts • Loads to be covered if there is a risk of losing loose materials • Lifting operations to consider weather and sea state.
Hydrocarbon spill response activities	Spill response	• Potential impacts to marine fauna from dispersants, disturbance to benthic habitat, scouring of sediments, and decrease in water quality.	• Vermilion maintains contracts with oil spill response organisations, operational and scientific monitoring providers, and logistics operators for support in the event of a hydrocarbon spill. • Vermilion tests response arrangements annually to ensure preparedness for unplanned hydrocarbon spills. • Where required, implementation of response strategies will be undertaken as per the NOPSEMA-accepted Oil Pollution Emergency Plan (OPEP) and in consultation with or under direction of the Commonwealth or State Control Agency.

Consultation

Consultation provides Vermilion with an opportunity to receive feedback from authorities, persons and organisations whose functions, interests or activities may be affected by proposed petroleum activities. This feedback helps us to refine or change the management measures we are planning to address potential activity impacts and risks. Vermilion's objective for the proposed activities is to ensure the activity is carried out in a manner that is consistent with the principles of Ecologically Sustainable Development (ESD) and reduce environmental impacts and risks to a level that is As Low As Reasonably Practicable (ALARP) and acceptable over the life of the activity.

Consultation also helps us to identify values and sensitivities where information is not publicly available, such as spiritual and cultural connection to land and sea country, as well as first-hand feedback on commercial and recreational fishing, tourism and local community activities and interests.

Feedback

If you consider you may be a relevant person, please contact us as soon as possible if you require any further information or if you think you are not on our consultation list.

We are asking for relevant persons to provide feedback by **21 November 2025.**

Feedback provided by relevant persons will be considered in an addendum to the Wandoo Facility EP and through the life of the activity. Feedback from relevant persons will be included in the EP submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for assessment.

Please let us know if you would like your personal/organisational details or any part of your feedback to remain private and we will ensure this remains confidential to NOPSEMA.

Contact us

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