

Santos Tern-1 Wellhead Abandonment Environment Plan

1. Purpose of this report

NOPSEMA has accepted the Santos Tern-1 Wellhead Abandonment Environment Plan (the EP) submitted by Santos Limited (the titleholder) for a wellhead abandonment activity on WA-27-R in the Joseph Boneparte Basin.

This report explains how NOPSEMA took into account key matters raised by relevant persons in making its decision to accept the EP that may be of interest to the public.

This report accompanies the accepted Santos Tern-1 Wellhead Abandonment Environment Plan submitted by Santos Limited, which is available on the NOPSEMA website and should be referred to for further information.

1.1. Information relevant to NOPSEMA's decision:

In making the decision to accept this EP, NOPSEMA took into account:

- the Environment Regulations;
- NOPSEMA Assessment Policy (PL0050), Environment Plan Assessment Policy (PL1347) and Environment Plan Decision Making Guidelines (GL1721);
- NOPSEMA Section 572 regulatory Policy (PL1903);
- the Department of Industry, Science, Energy and Resources' Offshore Petroleum Decommissioning Guideline;
- the Santos Tern-1 Wellhead Abandonment Environment Plan;
- the information raised by relevant persons, government departments and agencies that is relevant to making a decision;
- relevant plans of management and threatened species recovery plans developed under the Environment
 Protection and Biodiversity Conservation Act 1999 (EPBC Act) and relevant guidance published by the
 Department of the Environment and Energy;

2. Next steps

Responsibility for the ongoing environmental performance of the activity remains, at all times, with Santos Limited.

NOPSEMA has legislated responsibilities to inspect and investigate offshore petroleum and greenhouse gas storage activities, and to enforce compliance with environmental law. These functions will be applied to this activity in accordance with NOPSEMA's policies.

3. Sensitive Information

Sensitive information gathered during consultation, such as the names and contact details of relevant persons, is not published in this report. Sensitive information is contained in a sensitive information part of the EP which has been considered by NOPSEMA during its assessment process.

4. Further information

If you would like further information about the activity, please contact the titleholder's nominated liaison person specified in the EP and on NOPSEMA's webpage for the Santos Tern-1 Wellhead Abandonment Environment Plan.

If you would like to be notified of regulatory information on the activity, such as start and end dates and enforcement actions (if any), please subscribe to updates from the <u>Approved projects and activities</u> page on NOPSEMA's website.

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How NOPSEMA has taken into account key matters raised during the assessment and decision-making process for Santos Tern-1 Wellhead Abandonment Environment Plan

Matter	Titleholder response	NOPSEMA's assessment and decision
Potential risk to commercial fishers from the presence of a petroleum wellhead Claims: The wellhead is close to tiger prawn fishing areas. The site may be in shallower waters and therefore in a fishing area. Tern-1 location could be used as a turnaround area. There are concerns that if a vessel net is snagged the vessel could roll.	Santos engaged with commercial fishing relevant persons to seek feedback on the potential impacts of leaving the wellhead on the seabed on fishers. This included Commonwealth and State fisheries management agencies, fisheries associations and Commonwealth and State fisheries including Northern Demersal Scalefish Managed Fishery (NDSMF) fishing licence holders in the Northern Prawn Fishery (NPF). Santos evaluated the risk for leaving the Tern-1 wellhead and guide base in situ in the EP, considering the risks to fishers and the claims received during consultation. The EP identifies that while the wellhead intersects the NPF, fishing intensity data for the NPF confirms that area around the Tern-1 wellhead is currently not actively trawled and unlikely to occur in the future. For the NDSMF, analysis of fishing effort data over the 2008 to 2018 period indicates there was no fishing effort from within the 10NM block surrounding the wellhead. Further, NDSMF is a trap and line fishery and does not present a trawl net snag hazard. In response to the claims made during consultation, Santos provided the following: • Confirmed the wellhead is located in water depths of 95m, which is greater than depths normally fished by the NPF.	NOPSEMA recognises the importance of ensuring oil and gas operators meet their decommissioning obligations as required under section 572 of the OPGGS Act. NOPSEMA also acknowledges the potential for the activity of abandoning the wellhead, if not appropriately managed, to pose a risk of interference to commercial fishers. Santos is seeking to deviate from the requirement to remove property which may be considered under section 572(7) of the OPGGS Act when the EP demonstrates that the proposed deviation delivers equal or better environmental outcomes compared to complete property removal and impacts and risks are acceptable. During the EP assessment, NOPSEMA required Santos to provide further evaluation to demonstrate leaving the wellhead in-situ presented an acceptable risk to fishers and would provide an equal or better environmental outcome to full removal. In response, Santos conducted further consultation with the NPF, engaged a SME to provide further advice on risks to the NPF fishery and undertook a technical feasibility assessment for removal of the wellhead. Santos also conducted an ROV survey to confirm the location of the wellhead and its status and included an additional control for notifying the NPF of the new wellhead location. Key information incorporated into the EP included:



Vessels operating in the NPF are designed for fishing in relatively shallow water (<50 m).

- Conducted an ROV survey to identify the location of the wellhead which was approximately 1.5 miles from of the previously known location.
- Confirmed the wellhead has been in place since 1971 with no incidents or events recorded.
- Conducted a study of historical snag incidents in the UK, which found capsizes only occurred in 0.06% of incidents in the UK between 1989 and 2016.
- Concluded that based on the low fishing effort within the vicinity of the Operational Area and the navigational equipment on board the NPF vessels (echo sounders and GPS plotters), the risk of snagging fishing equipment on the wellhead was considered low.

In response to consultation, Santos provided the updated wellhead coordinates to NOPTA and the AHO.

Santos also considered the use of a wellhead cover or cap to reduce the likelihood of snagging. This control was rejected as the cost (\$1.4M to \$1.8M) was grossly disproportionate to the benefit gained as snag risks would be reduced but not removed.

Santos concluded that the risk to fishers from abandoning the wellhead was reduced to as low as reasonably practicable and an acceptable level.

- The Joseph Bonaparte Gulf is fished primarily by the NPF for banana prawn, which includes adults of the white Indian variety found in 45 to 85 m. Adults of the common banana prawn are caught in water <45 m deep.
- Vessels operating within the NPF are configured for fishing in shallow water and are unlikely to venture into the deeper waters of the operational area.
- Fishing effort is likely to remain low in the future as larger companies acquire more available boat licenses reducing the capacity for exploratory fishing.

NOPSEMA also noted that there were no objections received to abandoning the wellhead by other NPF licence holders and no comments were received from the NDSMF managed fishery.

Given the consultation undertaken, evaluation of current and future risks, NOPSEMA agrees with the case made in the EP that risks to fishers have been reduced to ALARP and acceptable levels.

In making a decision regarding this matter, NOPSEMA took into account the content of the EP, relevant scientific literature, views expressed by relevant persons, section 572 of the OPGGS Act and NOPSEMA's Decision Making Guidelines (GL1721).