

Barossa Development

Development Drilling & Completions

Additional information for commercial fisheries

In addition to the Santos Barossa Development Drilling and Completions Environment Plan stakeholder consultation package, the following supplementary information is for commercial fishers active in the region.

The proposed drilling activity has the potential to affect the following commercial fisheries:

Commonwealth managed fisheries

- Northern Prawn Fishery
- Southern Bluefin Tuna Fishery
- Western Skipjack Tuna Fishery
- Western Tuna and Billfish Fishery

Northern Territory (NT) managed fisheries

- Aquarium Fishery
- Spanish Mackerel Fishery
- Timor Reef Fishery
- Demersal Fishery

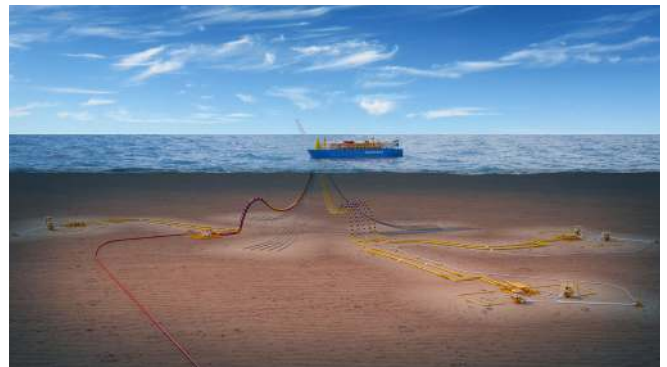
Commonwealth and NT managed commercial fisheries are illustrated in Figure 1 and 2, and bathymetric contours are illustrated in Figure 3.

A summary of Santos' knowledge of fishing effort in these fisheries in relation to the Barossa Field is provided in Table 1 and 2.

A summary of key concerns raised with Santos relevant to commercial fisheries from the proposed drilling activities is provided in Table 3. These concerns include:

- Interference with commercial fishing activities and exclusion from fishing areas.
- Introduction of Invasive Marine Species (i.e., marine pests).
- Vessel collision and refuelling incidents.
- Loss of well control and oil spill response.

Further assessment of potential impacts and risks associated with the proposed drilling activity will be included in the Barossa Development Drilling and Completions Environment Plan.



Feedback

Santos is committed to working together with the commercial fishing industry with the intent that each can proceed with their business in a safe and efficient manner, without loss or conflict.

To this end, if you have any objections, concerns or information requests regarding this activity please contact us by Friday, **9 July 2021** via phone or email. Santos would be pleased to meet in person, or to arrange an online forum, to discuss further.

Equally, if you do not wish to receive further information from Santos on this drilling activity, please advise directly or through your representative body.

Contact

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Table 1: Summary of Commonwealth managed fishery

FISHERY	SUMMARY OF FISHERY IN RELATION TO THE BAROSSA FIELD	ASSESSMENT OF POTENTIAL DRILLING IMPACTS
Northern Prawn Fishery	<p>The Northern Prawn Fishery management area extends over the Australia's northern coast, between Cape York in Queensland and Cape Londonderry in WA, from the low water mark to the outer edge of the Australian Fishing Zone (AFZ). The majority of the fishing effort within the Northern Prawn Fishery occurs in the area of the Gulf of Carpentaria, Joseph Bonaparte Gulf and along the Arnhem Land coast.</p> <p>The key target species are banana prawns, tiger prawns and endeavour prawns. There are two fishing seasons, with the season end date depends on catch rates:</p> <ul style="list-style-type: none"> Season 1 (mainly banana prawns caught): 1 April – 15 June Season 2 (mainly tiger prawns caught): 1 August – end of November <p>The areas of low, medium and high fishing effort are distant from the Barossa Field. Based on previous industry consultation prawn fishing is not expected in water depths greater than ~130 m.</p> <p>Scampi are targeted in deeper waters north of the Barossa Field. There is a low level of fishing spread across two to three months of the year.</p>	<p>No impact to the prawn fishery expected given the location and water depth of the Barossa Field.</p> <p>Scampi fishing occurs in deeper waters (>250 m) with recorded fishing effort to the north of the Barossa Field.</p> <p>Drilling activities are not expected to displace trawl fishers or affect scampi catch.</p>
Southern Bluefin Tuna Fishery	<p>The Southern Bluefin Tuna Fishery operates around Australia and extends to the high seas fishing zone (out to 200 nm from the coast). The fishery targets southern bluefin tuna only.</p> <p>Fishing activity is focussed in southern Australian waters with no activity expected across the Barossa Field or surrounds.</p>	No impact to the fishery expected.
Western Skipjack Tuna Fishery	<p>This Western Skipjack Tuna Fishery extends from west from Cape York Peninsula and around Australia to the South Australian / Victorian border, out to the edge of the AFZ.</p> <p>Little fishing activity has been undertaken in this fishery since 2008. No fishing activity associated with this fishery is expected to occur within the Barossa Field or surrounds.</p>	No impact to the fishery expected.
Western Tuna and Billfish Fishery	<p>The Western Tuna and Billfish Fishery management area extends over a large area westward from Cape York Peninsula off Queensland, around the west coast of WA and eastward, across the Great Australian Bight to 141°E at the South Australian/Victorian border.</p> <p>The fishery has operated at low levels of effort since the early 2000's due to economic conditions. Target species include albacore, bigeye tuna, yellow fin tuna, swordfish and striped marlin.</p> <p>This fishery is not known to be active within the Barossa Field or surrounds.</p>	No impact to the fishery expected.

Figure 1

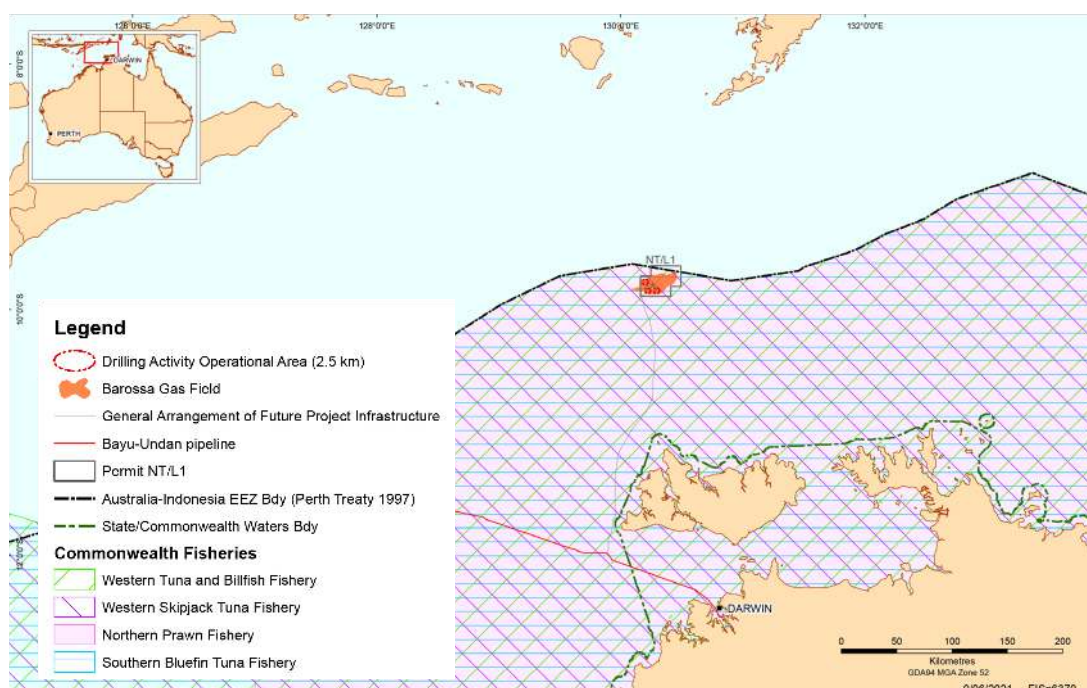


Table 2: Summary of Northern Territory managed fishery

FISHERY	SUMMARY OF FISHERY IN RELATION TO THE BAROSSA FIELD	ASSESSMENT OF POTENTIAL IMPACTS
Aquarium Fishery	<p>The Aquarium Fishery is a small-scale, multi-species fishery that prospects freshwater, estuarine and marine habitats to the outer boundary of the AFZ. The harvest of most marine species occurs within 100 km of Nhulunbuy and Darwin, though one license holder does occasionally collect from offshore locations, including at Evans Shoal (approximately 65 km west of the Barossa Field).</p> <p>This fishery is not expected to be active across the Barossa Field or surrounds.</p>	No impact to the fishery expected.
Spanish Mackerel Fishery	<p>The fishery extends seaward from the high-water mark to the edge of the AFZ. The majority of the fishing effort occurs in the vicinity of reefs, headlands and shoals and includes waters near Bathurst Island, New Year Island, northern and western Groote Eylandt, the Gove Peninsula, the Wessel Islands, the Sir Edward Pellew Group and suitable fishing grounds on the western and eastern mainland coasts.</p> <p>This fishery is not expected to be active across the Barossa Field or surrounds.</p>	No impact to the fishery expected.
Timor Reef Fishery	<p>The Timor Reef Fishery (TRF) extends north-west of Darwin to the WA-NT border and to the outer limit of the AFZ. Fishing occurs primarily in the 100 to 200-m depth range.</p> <p>Previous consultation indicates that the main target species is goldband snapper, with other tropical snappers (e.g., crimson snapper and saddletail snapper) also making up part of the catch; there are two active fishing licence holders currently operating in the fishery; main fishing method is trap fishing; fishery is most productive between October and May, with less activity during the dry season months of June-August due to strong northerly winds.</p> <p>Due to the water depth and based on a review of available historical catch data, fishing activity is not expected across the Barossa Field and surrounds.</p>	No impact to the fishery expected.
Demersal Fishery	<p>The fishery extends from waters 15 nm from the coastal waters mark to the outer limit of the AFZ, excluding the area of the Timor Reef Fishery. Hence, this fishery does not overlap with Barossa Field or surrounds.</p>	No impact to the fishery expected.

Figure 2

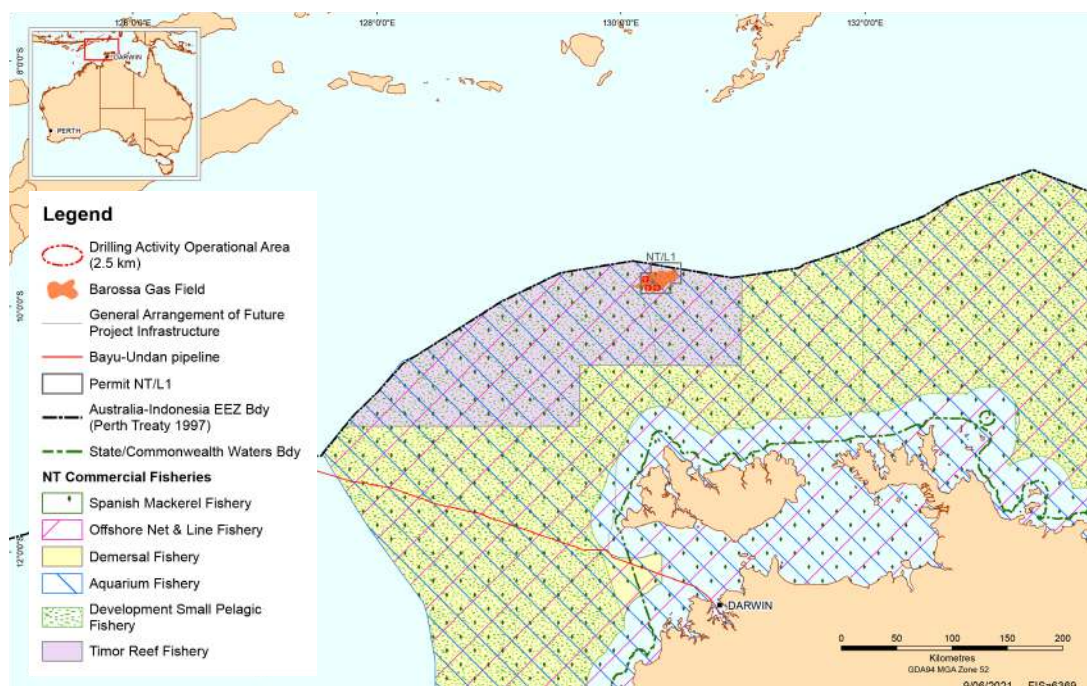
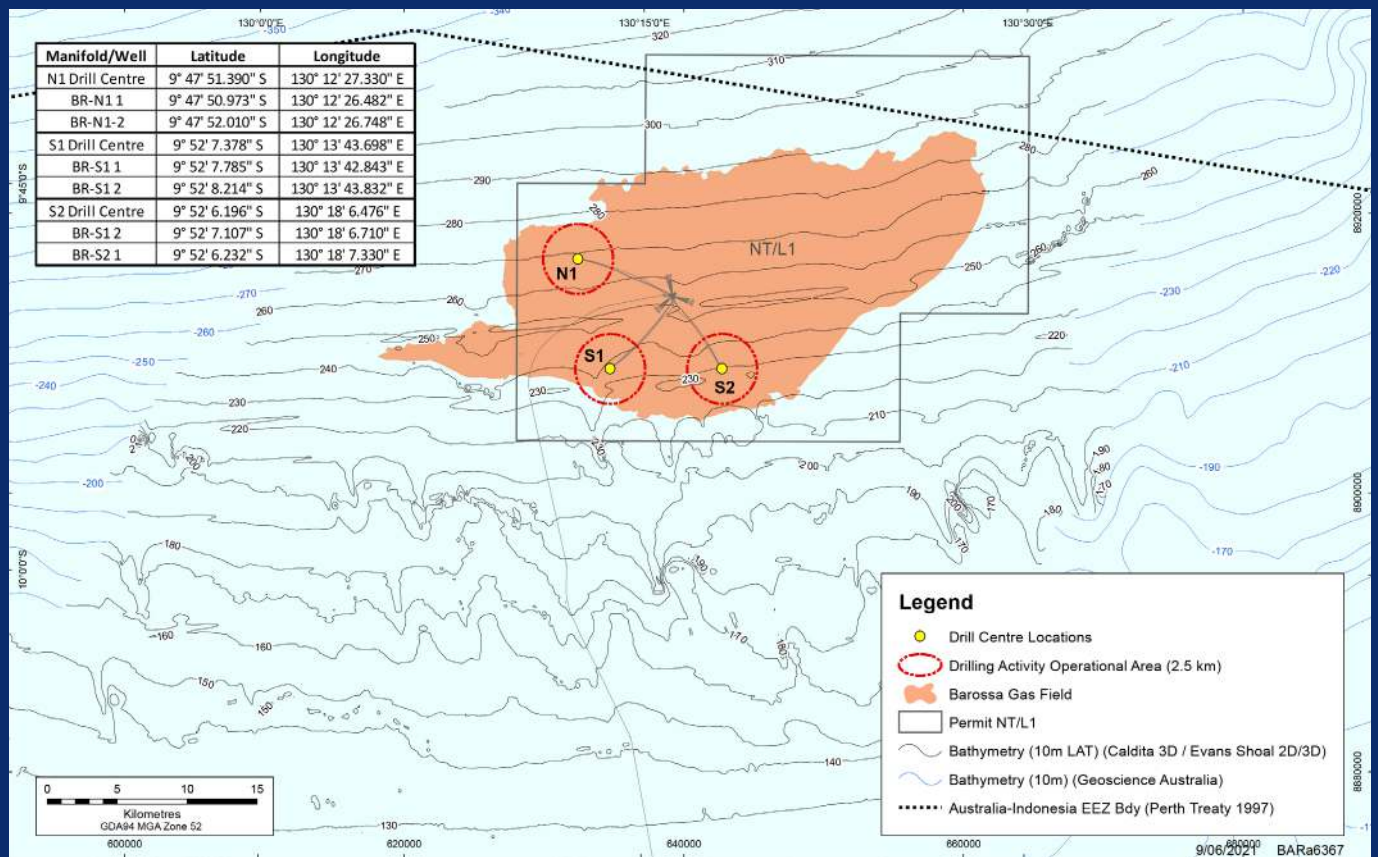


Table 3: Summary of potential impacts to commercial fisheries from the Barossa development drilling and completions campaign and proposed control measures

POTENTIAL IMPACT	PROPOSED CONTROL MEASURES
Interference with commercial fishing activities and exclusion from fishing areas	<ul style="list-style-type: none"> Northern Prawn and Timor Reef fishery licence holders will be notified in advance of the drilling campaign, and Santos commits to ongoing communications with licence holders as requested. Australian Hydrographic Service (AHS) Notice to Mariners and AMSA Maritime Safety Information (MSI) will be notified in advance of the drilling campaign. A 500-metre radius Petroleum Safety Zone (PSZ) will be in place around the MODU while on location and each of the completed wells until eventual abandonment. Santos will not restrict commercial fishing access to the Barossa Field, other than within PSZs, and is committed to concurrent operations where safety is not compromised. Support vessels outside of the range of the drilling activities will avoid commercial vessels that are actively fishing.
Introduction of Invasive Marine Species (i.e. exotic marine pests)	<ul style="list-style-type: none"> Vessels are managed to low risk in accordance with the Santos Invasive Marine Species Management Plan. Pursuant to the Biosecurity Act 2015 and Australian Ballast Water Management Requirements 2020, MODU and support vessel(s) carrying ballast water and engaged in international voyages shall manage ballast water so that marine pest species are not introduced. Vessels will have a suitable anti-fouling coating in accordance with the Protection of the Sea (Harmful Anti-fouling Systems) Act 2006.
Vessel collision and refuelling incidents	<ul style="list-style-type: none"> MODU has an Automatic Identification System (AIS) to aid in its detection at sea. Support vessels will be equipped with an AIS and radar. At least one support vessel is available at all times to monitor the MODU 500 m PSZ to identify approaching third-party vessels and communicate with the vessels. Support vessels will be equipped and crewed in accordance with the Navigation Act 2012 and Marine Orders. All vessels will have a dedicated Ship Oil Pollution Prevention Plan (SOPEP). Diesel bunkering will be undertaken under a Permit-to-Work System and bunkering procedure to reduce the risk of a release to sea.
A loss of well control, and associated gas and condensate release to sea	<ul style="list-style-type: none"> A Well Operations Management Plan (WOMP) will be developed and accepted by NOPSEMA prior to the commencement of the drilling campaign Prior to drilling there will be a well-specific Source Control Plan in place. A MODU Safety Case Revision will be prepared and accepted by NOPSEMA, which describes Santos and MODU operators agreed well control interface. An Oil Pollution Emergency Plan (OPEP) will be prepared and implemented, if required.

Figure 3: Barossa Development Development Drilling and Completions Location Map



OPERATIONAL AREA

Manifold	Latitude	Longitude
N1 Manifold	9° 47' 51.390" S	130° 12' 27.330" E
S1 Manifold	9° 52' 7.378" S	130° 13' 43.698" E
S2 Manifold	9° 52' 6.196" S	130° 18' 6.476" E

Stakeholder Engagement

Santos encourages open, two-way communication with stakeholders throughout the planning and implementation of this activity.

Stakeholder engagement for the proposed drilling activity was undertaken by the previous development operator in June/July 2019. Santos has decided to re-engage on the same activity to ensure relevant stakeholders remain informed and are afforded the opportunity to comment.

If you wish to discuss this consultation package further, please provide comment by **9 July 2021**.

Consultation for this activity will be ongoing post regulatory acceptance, until the activity is completed.

Timing

The Commonwealth Offshore Petroleum and Greenhouse Gas Storage Environment Regulations 2009 require a titleholder to have an accepted Environment Plan (EP), including corresponding Oil Pollution Emergency Plans (OPEPs), accepted by NOPSEMA before any petroleum activity can commence.

New projects proposed for development in Australian Commonwealth waters, such as Barossa, are required to have an over-arching Offshore Project Proposal (OPP) accepted by NOPSEMA as the first stage of the environmental assessment process. **The Barossa Development OPP was accepted in March 2018. The OPP is available at www.nopsema.gov.au**

The OPP is the over-arching environmental management plan that guides the preparation of more detailed EPs for each project activity. During the subsequent development of each EP, the titleholder must undertake consultation with 'relevant persons', as defined by regulations. In doing so, relevant persons are to be provided with sufficient information with reasonable time to assess the possible consequences of the activity on their functions, interests and activities. Titleholders must then provide feedback to relevant persons that their objections or claims have been understood, considered and appropriately addressed.

The Barossa Gas Export Pipeline Installation EP was the first Barossa EP to be prepared and submitted by Santos. It was accepted by NOPSEMA in March 2020. This consultation package relates to the Development Drilling & Completions EP, which will be the second to be prepared for submittal to NOPSEMA. Further EPs will be developed to cover other project activities, including subsea structure installation and FPSO facility and gas export pipeline commissioning and operations.

General Commitments

In the development of the EP, Santos will incorporate control measures to ensure environmental impacts and risks are acceptable and ALARP. The following control measures relating to interactions with other marine users will also be included. Any additional control measures identified during stakeholder engagement will be considered for inclusion in the EP.

POTENTIAL AREA OF INTEREST	SANTOS COMMITMENTS
Maritime notices <ul style="list-style-type: none">• Notice to Mariners (NTM)• AUSCOAST warnings	A notification will be provided prior to MODU/vessel arrival in the Operational Area and following departure. Notifications are provided to the Australian Maritime Safety Authority (AMSA) Joint Rescue Coordination Centre, Australian Hydrographic Office and designated port authorities so the maritime industry is aware of activities.
Stakeholder notifications	Other relevant marine users identified during stakeholder consultation and listed in the EP will be provided a commencement notification at least two weeks prior to the activity commencing. Santos will have a process in place to ensure any stakeholder feedback is recorded, evaluated and responded to.
Support vessel in place during activity to reduce potential for collision or interference with other marine users	At least one support vessel will be on standby at all times to monitor the MODU exclusion zone to identify approaching third-party vessels and communicate with the vessels.