

Keraudren Extension Phase 3 3D Marine Seismic Survey (MSS) Environment Plan

Information overview

This Commercial Fisher Fact Sheet supplementary information to Santos' general fact sheet about the proposed Keraudren Extension Phase 3 3D Marine Seismic Survey (MSS) that is specific to the information needs of commercial fishers who may be active in the Operational Area.

This supplementary information includes details about proposed on-water activities, an overview of fisheries potentially impacted by proposed activities and details on Santos' approach to the co-existence of marine seismic surveys and commercial fishing. Our approach is defined by:

- Minimising the extent of interruption by the seismic survey activities on commercial fishing operators' activities to the lowest practicable level.
- Mitigating the effects of the interruptions.
- Application of an equitable 'commercial fishers payment claim protocol'.

In developing this information Santos acknowledges the Guidance Framework Supporting cooperative coexistence of seismic surveys and commercial fisheries in Australia's Commonwealth marine area.

(see **Figure 1** for activity location).

Co-existence opportunities

Santos recognises the importance of the offshore petroleum and commercial fishing industries to regional and national economies, as well as the rights and responsibilities of individual operators to go about their respective activities.

Commercial fishers are encouraged to contact Santos at the earliest opportunity to discuss the proposed survey acquisition sequence and ways to minimise interference with fishing operations and vessel movements.

Opportunities are also provided to establish on-water communications, including activity notifications prior to the start, during and upon completion of activities.

Please note that any feedback provided is required to be

recorded in the Keraudren Extension Phase 3 3D Marine Seismic Survey (MSS) Environment Plan (EP) that will be 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.

As noted in the general fact sheet for this proposed activity, consultation is planned to commence on **8 April 2024**, with the consultation period closing on **8 May 2024**. More details on consultation and providing feedback can be found on the back page of this fact sheet.

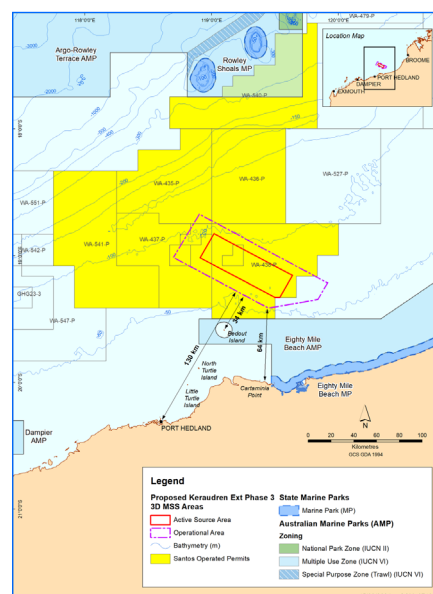


Figure 1. Keraudren Extension Phase 3 3D MSS activity location

Activity description

Activity details			
Timing	A single survey will be undertaken in either 2026, 2027 or 2028. Activity timing will be between 1 February and 30 June.		
Duration	The proposed survey duration is 40 days (including contingency).		
Water depth	Operational area 33 - 138 m. Active source area 33 - 100m.		
Vessels	Seismic survey vessel and up to two dedicated support vessels. Vessel details are unknown at this time.		
Vessel speed	Approx 4.5 knots (8.3 km/hr).		
Survey azimuth (line orientation)	North-west / south-east.		
Active source area	Total area approximately 1,790 km ² .		
Time to traverse a single sail line	Approx. 6 hrs and 30 mins.		
Seismic streamer length	Approx. 9 km.		
Sail line turn time	Approx. 3 - 4 hrs.		
Seismic streamer depth	Between 10 m and 25 m.		
Sail line spacing	Approx. 450 m - 600 m.		
Total seismic streamer spread width	Approx. 900 m.		
Volume of seismic source	Max. 3,500 in ³ .		
Operating pressure	2,000 psi.		
Seismic source depth	Approx. 5 - 10 m.		
Seismic source interval	Approx. 12.5 m.		
Exclusion zone	3 nm (5.6 km) exclusion (safety) zone around the seismic vessel and trailing streamers.		
Petroleum Exploration Permit	WA-438-P, WA-64-L, WA-435-P, WA-436-P and WA-437-P.		
Operational Area		Active Source Area	
Latitude	Longitude	Latitude	Longitude
19° 00' 54.699" S	118° 41' 54.401" E	18° 49' 37.740" S	119° 01' 7.575" E
18° 40' 22.954" S	118° 54' 10.086" E	19° 9' 24.248" S	119° 38' 17.629" E
19° 12' 57.212" S	119° 54' 51.410" E	19° 19' 53.326" S	119° 32' 16.141" E
19° 20' 48.243" S	119° 50' 13.533" E	19° 19' 53.328" S	119° 30' 00.618" E
19° 24' 52.891" S	119° 26' 53.029" E	19° 01' 00.930" S	118° 54' 32.254" E

Commercial fishery implications

Santos has undertaken an assessment to define the environmental, social, economic and cultural features that may be affected by proposed activities.

As part of this process, we have identified commercial fisheries that have been active in the Operational Area acknowledging that seismic surveys can potentially result in:

- Behaviour changes of target species in response to underwater noise emissions and the physical presence of the seismic vessel and trailing equipment.
- Disruption or temporary physical displacement of fishing operations from preferred fishing grounds and/or damage to fishing gear due to interaction with the survey vessel and trailing equipment.

Operational area access

Commercial fishers and other marine users can access the Operational Area but are requested to avoid the 3 nm (5.6 km) exclusion (safety) zone around the seismic vessel and trailing streamers during the survey to ensure the safety of the seismic vessel and third-party vessels.

Santos has proposed the below control measures where seismic and commercial fishing activities occur concurrently:

- Santos will not restrict commercial fishing access to the Operational Area where safe to do so and concurrent operational planning will be undertaken with commercial fishers.

Table 1. Commercial fisheries identified

Fishery	Operational Area	EMBA
Commonwealth fishery		
North West Slope Trawl Fishery	No	Yes
Southern Bluefin Tuna Fishery	No	Yes
Western Tuna and Billfish Fishery	No	Yes
Western Deepwater Trawl Fishery	No	Yes
WA fishery		
Northern Demersal Scalefish Managed Fishery	No	Yes
Mackerel Managed Fishery	Yes	Yes
West Australian Sea Cucumber Fishery	No	Yes
Pearl Oyster Managed Fishery	Yes	Yes
Marine Aquarium Fish Managed Fishery	No	Yes
Hermit Crab Fishery	No	Yes
Nickol Bay Prawn Managed Fishery	Yes	Yes
Pilbara Crab Managed Fishery	No	Yes
Pilbara Fish Trawl (Interim) Managed Fishery	Yes	Yes
Pilbara Line Fishery	Yes	Yes
Pilbara Trap Managed Fishery	Yes	Yes
Specimen Shell Managed Fishery	No	Yes
Onslow Prawn Limited Entry Fishery	No	Yes

- Santos will develop communication protocols including direct radio contact for both parties at sea and provide operational survey plans, commencement and cessation notifications, and daily operational reports if requested.
- At a minimum the daily operational reports will include:
 - Current seismic survey vessel position.
 - Look ahead seismic survey activities and vessel positions.
 - Support vessel activities and positions.
- Vessel contact details.
- Santos WA management contact details.
- Support vessels outside of the range of the active seismic survey will avoid commercial vessels that are actively fishing and avoid schooling fish in the vicinity of active commercial fishing.

Commercial key indicator fish species spawning

The Keraudren Extension Phase 3 3D Marine Seismic Survey (MSS) EP will include an assessment of potential temporal overlap between spawning periods for commercial key indicator fish species and acquisition of the survey. Control measures are presented in the following text. A summary is provided in **Table 2**.

Commercial prawn and indicator fish species spawning	J	F	M	A	M	J	J	A	S	O	N	D	Source
Banana prawn spawning													AFMA 2020
Juvenile banana prawn migration													Longeran et al. 2002
Brown tiger prawn spawning													AFMA 2020
Grooved tiger prawn spawning													AFMA 2020
Blue endeavour prawn spawning													AFMA 2020
Red endeavour prawn spawning													AFMA 2020
Red emperor													DPIRD 2019
Goldband snapper													DPIRD 2019
Spanish mackerel (Kimberley stock)													DPIRD 2019

Key

 Sensitivity/activity occurs
  Extended peak spawning period
  Peak spawning/migration period

Commercial fishers claim protocol

The survey will potentially impact commercial fishers whose fishing operations overlap with the Operational Area of the seismic survey.

Santos has a process to enable commercial fishers to lodge evidence-based claims for temporary loss of fish catch, displacement costs and equipment damage or loss directly caused by the seismic survey. Santos will also assess requests for administrative support to help fishers collate historical fishing data required for an evidence-based claim.

The control measures identified within the draft Environment Plan, to outline how the potentially competing demands of commercial fishing operators and Santos' seismic survey may be managed, are consistent with those adopted for other Santos marine seismic surveys.

Consultation

All petroleum activities in Commonwealth waters must have an Environment Plan (EP) accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) before any activities can take place.

Under Commonwealth Environmental Regulations, Santos is required to consult with relevant persons about proposed activities when preparing an EP. A relevant person includes authorities, persons or organisations whose functions, interests or activities may be affected by the proposed activity.

Consultation provides Santos with an opportunity to receive feedback from authorities, persons and organisations whose functions, interests or activities may be affected by proposed activities.

This feedback helps us to refine or change the management measures we are planning to address potential activity impacts and risks. Santos' objective for proposed activities is to 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 first-hand feedback on commercial fishing activities and interests.

Providing feedback

If you consider that you have commercial fishing functions, interests or activities that may be affected by our proposed activity, you may be a relevant person. Please contact us by **8 April 2024** to allow Santos time to initiate consultation with you, so you can tell us how you would like to be consulted throughout this process or if you need additional information. The consultation period for this proposed activity closes on **8 May 2024**.

The merits of relevant person feedback provided through the consultation process will be considered during EP development, with responses summarised and included in the EP submitted to 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.

More information about how community members can participate in environmental approvals for activities proposed in Commonwealth waters has been published in a [brochure](#) by NOPSEMA.

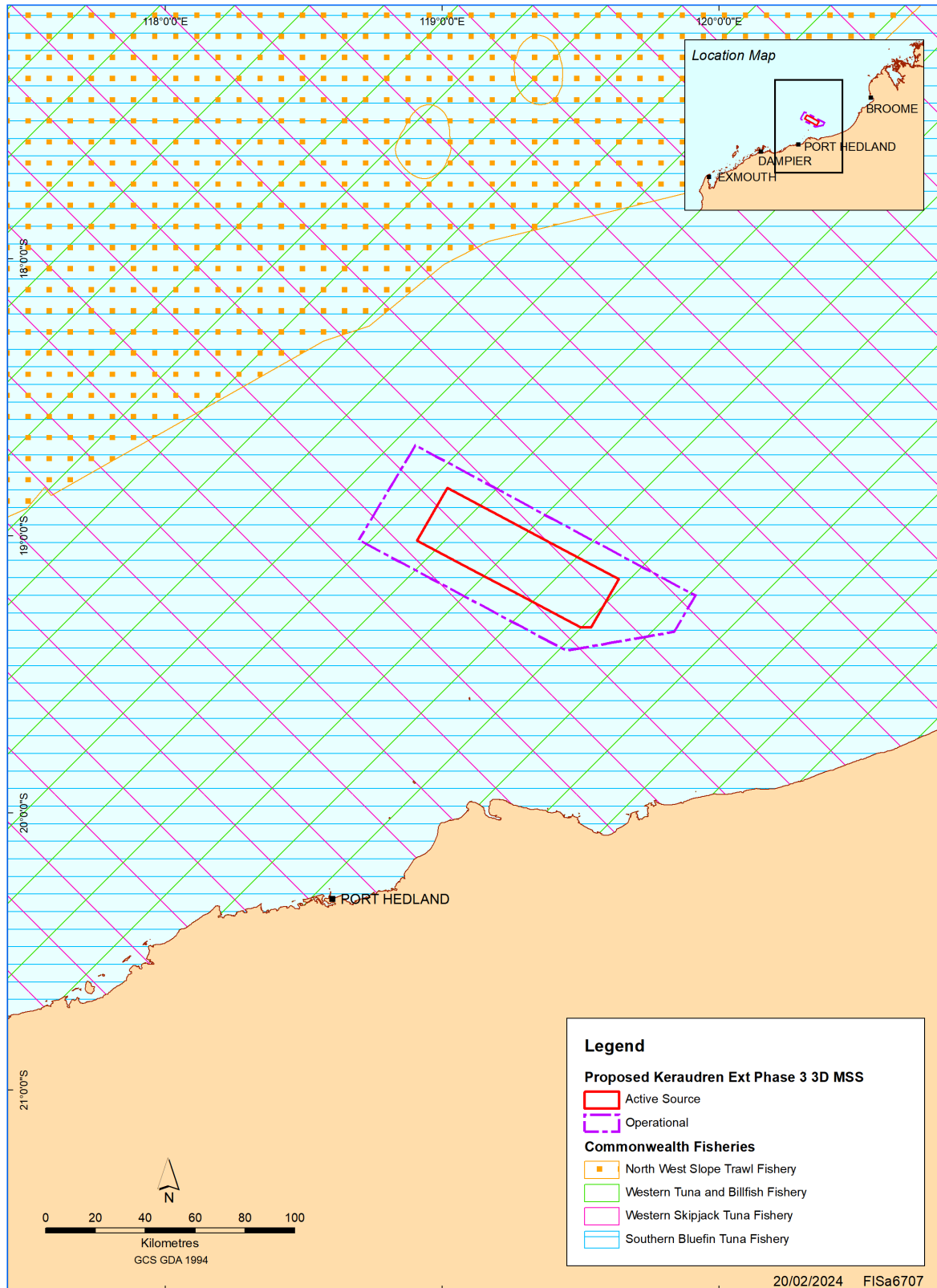
Contact

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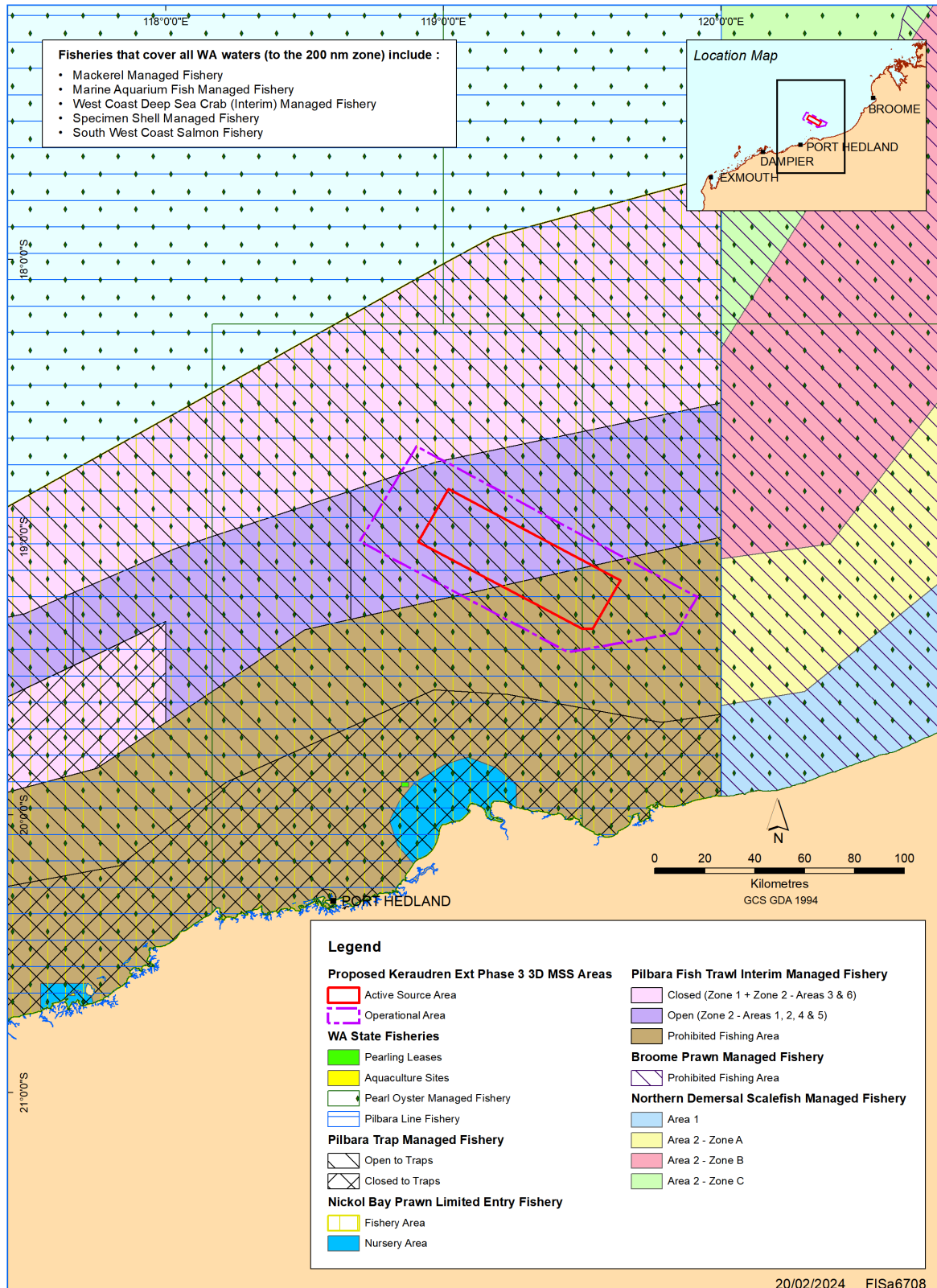
santos.com/offshoreconsultation

Appendix A



Keraudren Extension 3 3D MSS – Commonwealth Commercial Fisheries Map

Appendix A



Keraudren Extension 3 3D MSS - State Commercial Fisheries Map