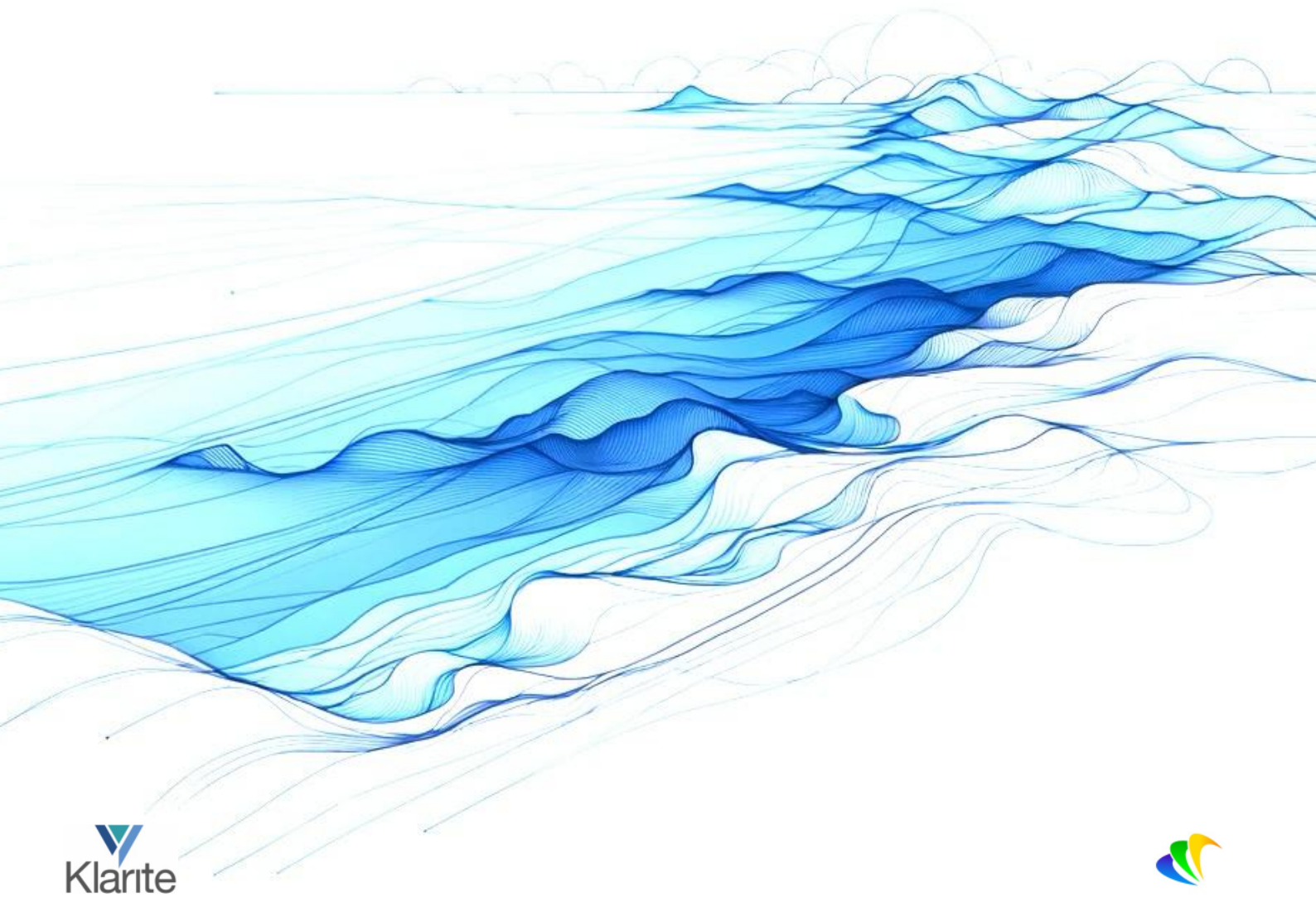
REGIA
Marine Seismic Survey

Description of Activity

Appendix A2: REG-EP-002-A2

Rev 7

December 2025



Klarite

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1 Introduction

This Description of Activity has been prepared by CGG Services (Australia) Pty Ltd (**CGG**) in its environmental management of the Regia Marine Seismic Survey (**Regia MSS**). This is the content of the Environment Plan (**EP**) that will be submitted to meet the requirements of Section 21(1) of the *Offshore Petroleum and Greenhouse Gas Storage (*Environment*) Regulations* 2023 (the Regulations).

1.1 Purpose

The purpose of this document is to provide a comprehensive description of the activity including the following:

a) the location or locations of the activity.

b) general details of the construction and layout of any facility.

c) an outline of the operational details of the activity and proposed timetables.

d) any additional information relevant to consideration of environmental impacts and risks of the activity.

1.2 Overview

To commence the preparation of the EP for the Regia MSS, initial areas of interest were established for the largest possible activity and the largest possible extent for its environmental effect. These areas were called the Activity Planning Area (**APA**) and the Environmental Planning Area (**EPA**) respectively. The EPA framed the initial studies and community consultation effort. Within the EPA, the APA was established to frame the maximum geographical limits of the activity. The Environmental Planning Area and Activity Planning Area are shown in Figure A2-1 (MAP-REG-EPM-043).

The Environmental Planning Area was set at 155 km around the Activity Planning Area. This distance was selected using professional judgement and a review of previous oil spill risk assessments for similar activities in the region (Appendix B11). Further justifying the distance, the NERA Reference Case: Consequences analysis of an accidental release of diesel (NERA 2018) found that diesel spills under 700m^3 were reliably predicted to disperse within this distance.

1.3 Environmental Regulations and Guidelines

The primary legislation governing the Regia MSS is the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (the Act) and the Regulations. There are numerous additional laws, regulations, and guidelines that apply requirements to the Regia MSS activity. These can be found in Appendix B2 and their relevance to each environmental aspect is considered in each assessment (Appendices D1- D4 and E1 – E9). Any legislative requirements discussed in this document if they are relevant to the management of environmental impacts and risks.

The following terms are used in this document and are defined in the Regulations:

> A **petroleum activity** or **activity** means operation or works in an offshore area undertaken for the purpose of: (a) exercising a right conferred on a petroleum titleholder under the Act by a petroleum title; or (b) discharging an obligation imposed on a petroleum titleholder under the Act or a legislative instrument under the Act.

The following terms are used in this document and have been defined by CGG:

> **Sail line** means the line(s) that are intended to be followed to acquire the geophysical objectives of the survey where the sound source will be discharged at full power. Sail line(s) are indicative only and can only occur within the survey acquisition area. Line turns, run ins

(including ramp up), deployment and retrieval activities of the seismic vessel are not included within this definition.

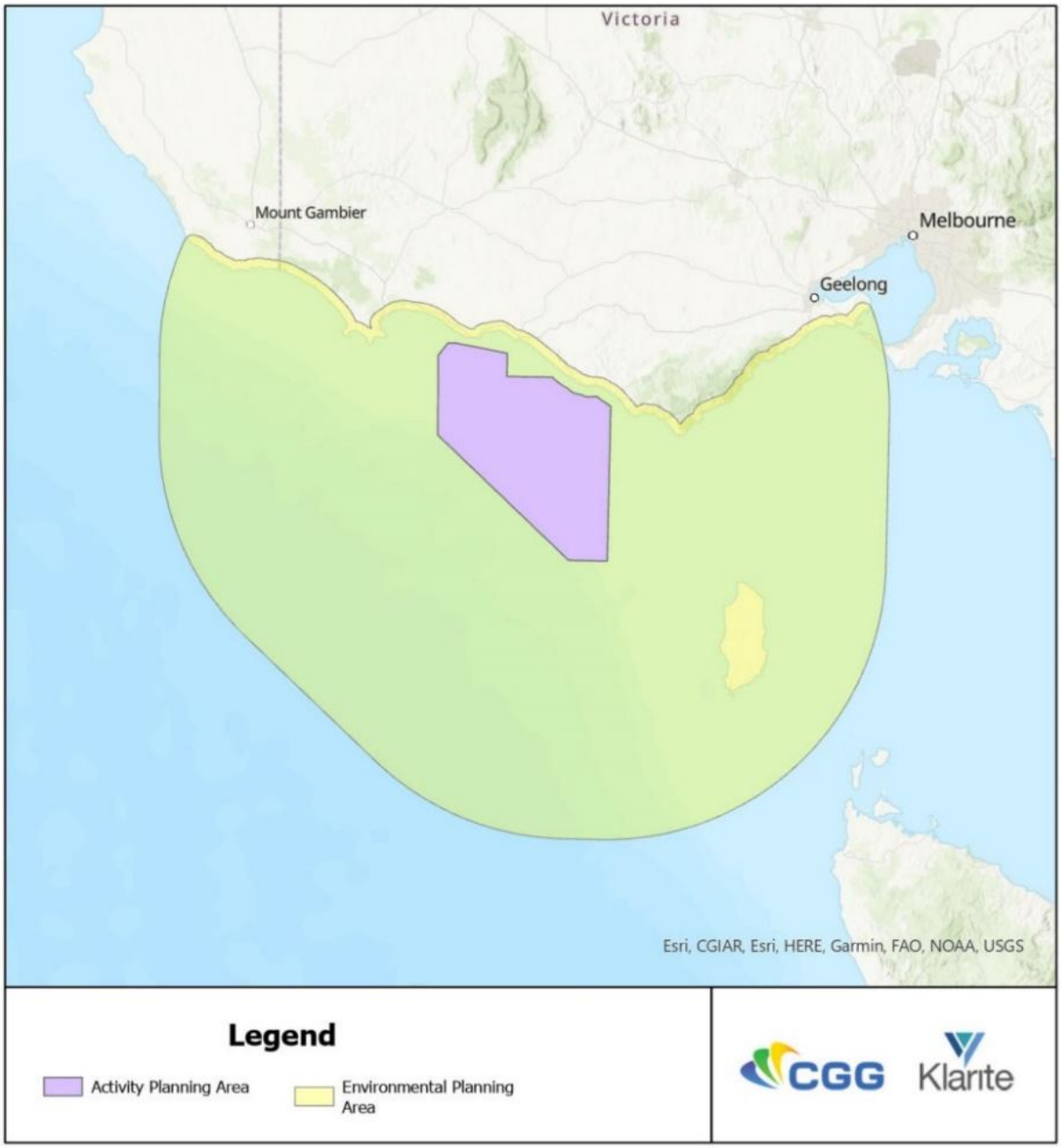


Figure A2-1 - Regia MSS Environmental Planning Area and Activity Planning Area

2 Consultation Input

CGG carried out the consultations required by the regulations to:

- Improve the predictive quality of this assessment by seeking relevant person input into the preparation of the EP.
- To verify the description of the environment that CGG produced as part of its environmental assessment process through information provided to CGG by relevant persons.
- Receive objections or claims about the adverse effects of the activity on a relevant person's functions, interests, or activities.

The information received from relevant persons can be found in each relevant person consultation report. It has been considered in the preparation of this assessment.

Objections or claims about the adverse of the effects of the activity can also be found in each relevant person's consultation report. They have been assessed for merit and CGG has written a statement of its response to each objection or claim. Any objection or claim relevant to this assessment and subsequently considered in its preparation can be found in Annex 2.

3 Description of Activity

3.1 Purpose and Need

The Otway Basin has been producing hydrocarbons since the 1990's and has seen the discovery of several gas fields. Since that time, seismic acquisition and processing technologies have advanced dramatically. The Regia MSS aims to survey areas where 3D geophysical data has not been acquired previously or applying new technologies to overlapping areas of existing 3D data, to improve our understanding of the geophysics of the area. Exploration for new gas reserves has been identified by the Labour Government's Future Gas Strategy[1] as necessary to meet predicted gas supply shortfalls and the Otway basin is explicitly mentioned as a possible source of additional domestic supply.

3.2 Project Design, Location and Timing

Two envelopes define the limits of the activity. A design envelope, which is the broadest timing and location of the activity, and an operating envelope which narrows the timing and location of activities. These envelopes changed during the environmental assessment. The nature of any change and the reasons for it were communicated through the online Regia MSS Consultation Hub and through consultation, where relevant.

3.2.1 Design Envelope

Prior to the activity the vessels contracted by CGG are not part of any petroleum activity. During this time, the vessels are subject to all maritime laws but not the OPGGS Act and Environment Regulations. As such, pre-survey vessel activities such as movements to the region, equipment deployment, water depth monitoring, pre-start whale monitoring, towing equipment and weather avoidance may occur anywhere at any time before the petroleum activity commencement. However, consistent with consultation outcomes with the Director of National Parks (Event ID 6887), towing of equipment outside of the Operational Area must not occur within an Australian Marine Park (AMP) unless under emergency conditions where safety of life at sea is a priority. Prior to the activity the sound source can be in the water but must not be activated, tested, or in any way discharged.

The activity commences in two stages: operations and acquisition.

Operations start when the vessels enter the Operational Area for the purpose of the survey and ends when the vessels leave the Operational Area. The seismic and support vessels will conduct a few days of operational movements to test the equipment within the Operational Area. Testing of the sound source may only occur within the Active Source Area. Any contracted vessels may leave and return to the Operational Area at any time throughout the survey any number of times to conduct activities such as fauna monitoring, weather avoidance, or for any safety related reason.

If the survey vessel leaves the Active Source Area the sound source must not be activated, tested, or in any way discharged at full power. When any contracted vessel is outside the Operational Area, they are subject to all maritime laws but not the OPGGS Act and Environment Regulations.

Acquisition starts when the sound source is discharged at full power for the first time and ends when the sound source is discharged at full power for the final time. The parameters in Table A2-1 set the timings within the design envelope:

There will be no petroleum activities within a designated Australian Marine Park (State and Commonwealth).

[1] https://www.industry.gov.au/sites/default/files/2024-05/future-gas-strategy.pdf

Table A2-1 - Design envelope parameters

Parameter	Details
Earliest start date (operations)	00:01 AEST on 16 September 2025
Earliest start date (acquisition)	00:01 AEST on 16 September 2025
Latest finish date (acquisition)	23:59 AEST on 31 December 2028
Latest finish date (operations)	23:59 AEST on 31 December 2028
Night-time operations	Yes

3.2.2 Operating Envelope

Acquisition may occur 24 hours a day over consecutive days, or at unspecified intervals due to time for equipment deployment, weather delays, fauna instigated shutdowns, contractor downtime, line turns, and equipment retrieval. The following parameters set the operating envelope:

Table A2-2 - Operating envelope parameters

Parameter	Details
Maximum days (operations)	90 continuous days in a single phase (i.e. once started the activity cannot be restarted at another time).
Maximum days (acquisition)	60 days total within the 90 days (i.e. once started acquisition may start and stop any number of times making these non-continuous days).
Maximum survey acquisition area	2750 km^2

3.3 Outline of the Operational Details of the Activity

The activity is the acquisition of geophysical data (a seismic survey) and any other activities (support activities) required to support acquisition, carried out within the operational area prior to and after acquisition.

3.4 Location of Activities

There are several progressively smaller areas that govern the various component parts of the activity, these are described below and shown in Figure A2-2 and Figure A2-3:

- **Operational Area (OA):** an area in which survey vessel activities can occur including equipment maintenance and deployment/recovery, crew change and resupply. The sound source cannot be active in the Operational Area, outside of the Active Source Area and Mitigation Source Area.
- **Mitigation Source Area (MSA):** an area at the end and beginning of the sail lines where a very small source (~ 70 cu in) will be discharged during line changes to alert marine fauna to the presence of the activity.
- **Active Source Area (ASA):** an area within the Operational Area in which the sound source can be active. Line run-ins occur within this area (including ramp ups) and

outside of the Survey Acquisition Area. The sound source cannot be discharged at full power within the Active Source Area and outside of the Survey Acquisition Area.

- **Survey Acquisition Area (SAA):** the primary target area (full fold) for the survey and the area in which seismic data will be recorded, including run outs, and the sound source can be discharged at full power.

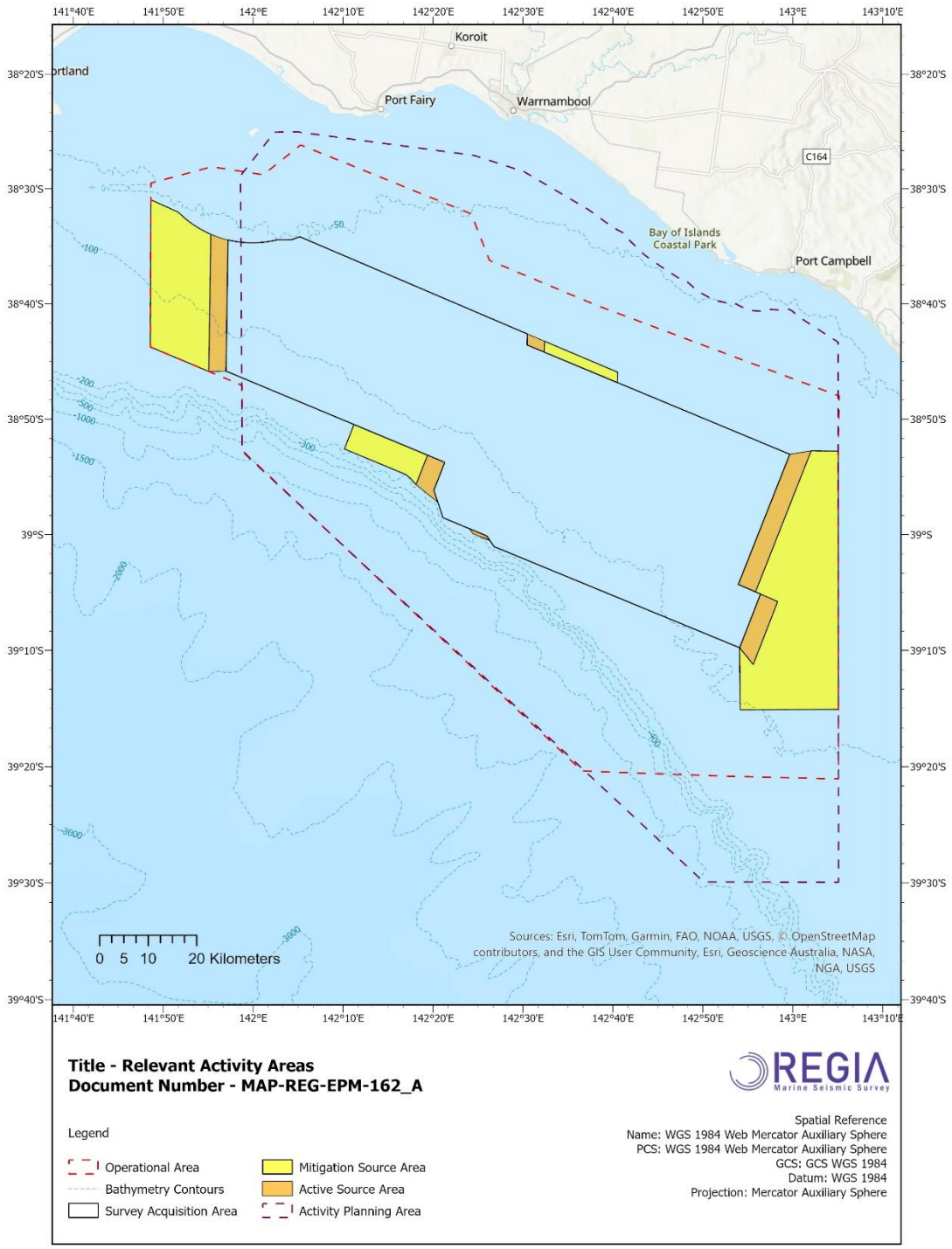


Figure A2-2 – Map of Relevant Activity Areas

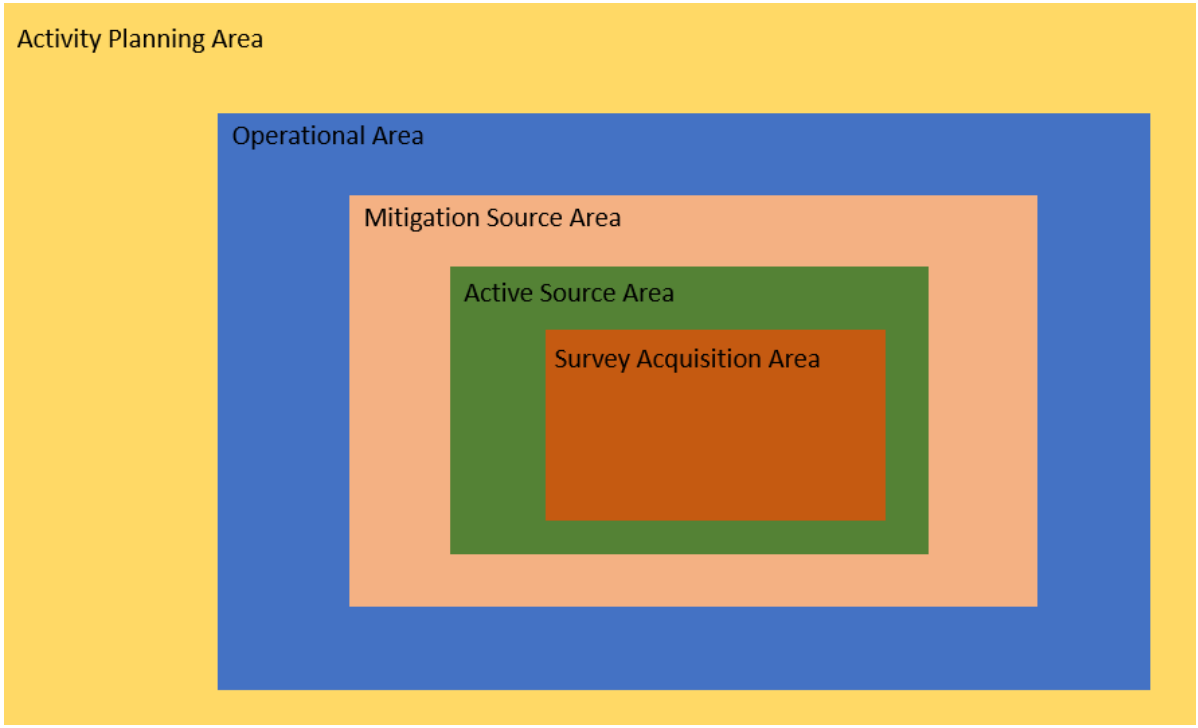


Figure A2-3 – Graphic of Relevant Activity Areas

3.4.1 Operational Area

The Operational Area for the Regia MSS has been refined through consultation and throughout the environmental assessment process. In May 2023, it was decided that the Operational Area needed to extend westward to meet geophysical objectives of acquiring full data up to the boundary of petroleum title Vic/P79. This required an extension to the Operational Area beyond the Activity Planning Area. This change was communicated at community sessions throughout May and in the May newsletter. The final coordinates for the Operational Area are shown in Appendix B12 MAP-REG-EPM-041_B.

3.4.2 Mitigation Source Area

The Mitigation Source Area has been added to the activity description following confirmation of the Survey Acquisition Area such that draft sail lines are known and to clarify when low-power sound discharges can be made.

3.4.3 Active Source Area

The Active Source Area for the Regia MSS has been reduced through consultation and thorough environmental assessment. Like the Operational Area, in May 2023, it was decided that the Active Source Area needed to extend westward to meet geophysical objectives. This required an extension to the Active Source Area up to the western edge of the Activity Planning Area. This change was communicated at community sessions throughout May and in the May newsletter. The final coordinates for the Active Source Area are shown in Map 042 (MAP-REG-EPM-042).

3.4.4 Survey Acquisition Area

The Survey Acquisition Area for the Regia MSS has been reduced through consultation and through environmental assessment. It is entirely contained within the Active Source Area and the activity

limitations related to depth contours adopted through consultation provide the boundary of the area. The sail lines are entirely contained within the Survey Acquisition Area. The final coordinates for the Survey Acquisition Area are shown in Map 088 (MAP-REG-EPM-088).

3.5 Seismic Survey

Seismic surveying is a widely used exploration method to define and analyse subsurface geological structures in the marine environment. Seismic surveying uses a technique that directs acoustic energy into subsurface geological structures from equipment deployed from a specifically design survey vessel. This activity is called a marine seismic survey (MSS) and includes the towing of a sound source and multiple streamers along sail lines, day, and night.

3.5.1 Streamers and Sail Lines

The survey vessel will tow streamers. The streamers contain sound sensors that detect the pressure and velocity of sound levels reflected from the geological structures being targeted. Table A2-3 provides relevant environmental management details about the streamers and sail lines. The survey may be carried out in sections allowing flexibility for the activities to adapt to environmental features and occurrences such as marine fauna observations. Indicative sail lines have been numbered to facilitate communication with other marine users and inclusion of some limitations on lines acquisition order (see Activity Limitation 12). The indicative sail line numbers can be found in Map 163 (MAP-REG-EPM-163).

Table A2-3: Environmentally Relevant Details for Streamers and Sail Lines

Parameter	Details	Environmentally relevant information
Maximum number of streamers	16	Using more streamers lessens the acquisition time. The highest number of streamers will be used that meet geophysical objectives of the survey and vessel recording capability.
Maximum length	8,100 m	The streamers will trail behind the survey vessel and present a hazard to navigation and marine fauna.
Maximum depth below sea surface	25 m	
Average and maximum streamer horizontal separation	100 m (average) 200 m (maximum)	Separation distance will be maximised whilst meeting survey objectives and vessel capability to lower the acquisition time. Streamer fanning will be used to increase the swath width at the end of the streamer array to minimise the need for in-fill lines.
Streamer type	Solid or gel core	The streamers are made of a solid core construction, with either a solid foam core or a solid gel core used for internal ballast.
Maximum number of sail lines in the racetrack survey design	Unknown	Number of sail lines will be minimised to reduce acquisition time.
Likely sail line orientation	North-west to South-east	Decreases acquisition time and decreases sound levels received at mainland Victoria due to increased sound profile forward and aft of the sound source.
Minimum line separations	500 m	Separation distance will be maximised whilst still meeting geophysical objectives.

Within the streamers, acoustic transponders, also known as Ultra-short BaseLine (USBL) acoustic positioning beacons, form part of the seismic spread and will be used intermittently for streamer and equipment micro-positioning. These systems are narrow band high-frequency (65 kHz), short-

duration (milliseconds), relatively small sources (60 – 100 cui) like typical vessel-based fish finders /echosounders. The sound emitted from the USBL's is designed to communicate very precise location data to receivers placed in the adjacent streamers (i.e. within hundreds of meters). This ancillary source of sound is managed under the same control framework as the sound source which entirely subsumes the small acoustic footprint of the USBL's (Event ID EVT352).

3.5.2 Sound Source

The survey vessel will acquire the seismic data by towing three acoustic source arrays with three sources per array operating sequentially, one array discharging as the others recompress. Details about the sound source that are relevant to environmental management are provided in Table A2-4. These details provide the basis upon which predictions of sound levels and attenuation in the marine environment can be made.

Table A2-4: Environmentally relevant details of the sound source

Parameter	Details	Environmentally relevant information
Number of source arrays	Three	Nil
Maximum tow depth	8 m	Nil
Working Frequency range	0-200 Hz	Nil
Low-power mode	70 – 100 cui	Used to transit between survey lines anywhere in the Operational Area. Used to manage impacts to flocks of foraging seabirds observed within 500 m of the survey vessel.
Maximum total volume	2,630 cui	Minimised to achieve survey objectives.
Core operating pressure	2000 psi (~1950-2050 psi)	Minimised to achieve survey objectives.
Shot point interval	12.5m	Minimised to achieve survey objectives.
Towing speed	4-6 knots	Speed over ground, minimised the risk of collisions with marine fauna.

The sound source will be towed along a series of adjacent and parallel sail lines in a 'racetrack' like pattern. At the end of the first line, the vessel will turn in a wide arc to position itself for another parallel line in the opposite direction, offset by several kilometres from the previous line. The vessel will then turn again to position itself to return in the original direction along a third parallel line, offset from the first line. This pattern is repeated in the survey acquisition area until the required coverage is completed.

To obtain full coverage of the eventual acquisition area the seismic source must remain at full power for at least half a streamer length prior to the vessel turn. This 'run out' of the acquisition area occurs each time the vessel ends an acquisition sequence and occurs entirely within the Active Source Area. Then, during the 'run in' to the Survey Acquisition Area, soft-start procedures (see Appendix G1 or G2 for details), begin with the operation of the single smallest air chamber in the array and then the gradual ramp-up to include additional air chambers until the source is at full power for the commencement of full power acquisition at the Survey Acquisition Area boundary.

The source may be operated below full power for short durations in the Active Source Area for maintenance and testing. These activities are infrequent and typically involve intermittent discharge of individual air chambers.

3.6 Support Activities

Support activities include:

- Survey vessel when the sound source is not active.
- Support vessel operations for safety, resupply, staff transfers, and maritime observations.
- Aviation operations for staff transfers and resupply.

In the unlikely event of an emergency additional vessels and aircraft may be deployed to assist the response efforts.

3.6.1 Vessels

The survey will be conducted using a purpose-built seismic survey vessel. Its purpose is to tow the sound source and streamers along the sail lines. The survey vessel will have a small on-board workboat, which may be launched to assist with equipment deployment and retrieval, or to carry out streamer maintenance activities. The survey vessel will also have a fast rescue craft (FRC) on-board. Environmentally relevant details of the survey vessel are included in Table A2-5.

Table A2-5: Environmentally Relevant Details of the Survey Vessel

Parameter	Details	Environmentally relevant information
Vessel length	90 – 130 m	Potential for interference with other marine users, inform expected sound source.
Total crew accommodation	70 - 80 people	Accommodating crew results in the discharge of sewage, greywater, reverse osmosis brine from water treatment, and food wastes.
Vessel class	1A1	This class has two fully independent propulsion systems providing redundancy in the event of loss of steerage.
Endurance at sea	32 days	Refuelling, crew transfers, bulk transfers of chemicals, waste, and supplies will occur during the activity.
Largest fuel tank size	257.4 m^3	Results in a worse-case credible oil spill risk in event of a vessel collision. Note: a volume of 250m^3 has been used as the worst-case release because fuel tanks are rarely topped out and hydrostatic pressure and/or ballasting can prevent release of the full inventory.
Dynamic positioning	No	Informs expected level and sound source of continuous sound from vessels.
Propulsion and power	Main engines, generators, and bow thrusters.	Results in discharges of cooling water and bilge water.
Vessel lighting – navigation	Minimum for safe navigation.	Mandatory indication of the 'restricted ability to manoeuvre.'
Vessel lighting – safe work	Minimum for safe work.	The working deck areas will be lit as required to provide for safe work.

At least two (2), and no more than three (3) support vessels, comprising a 'supply vessel' and at least one or two smaller 'escort vessel(s)', will accompany the survey vessel to provide logistical, safety and

equipment management duties. At least one vessel will be rigged and capable of towing the survey vessel in the case of an emergency. The support vessels will mobilise to and from the mainland to undertake re-supply, refuelling and other support functions for the activity.

The support vessels may be required to leave the operational area to respond to unplanned events such as retrieval of accidentally over boarded floating objects, or communicating with a third-party vessel, or for other logistical and safety reasons. The support vessels transit between the port and the activity at a frequency dependent on logistics schedules and/or issues arising.

In addition, there will be one (1) spotter vessel as part of the marine spread dedicated to marine fauna observation. It will be used near the survey vessel and tasked as required by the prevailing circumstances to improve marine fauna detection capabilities.

3.6.2 Aircraft

Aircraft maybe used for crew changes, critical equipment supply, surveillance and emergency response uses. Aircraft includes helicopters, fixed wing planes, and drones. Helicopter operations occur as needed, which is approximately once every 3-4 weeks.

4 Additional information relevant to consideration of environmental impacts and risks of the activity

4.1 Supporting Operations Conducted Outside the Activity Boundary

For the purposes of this EP, the petroleum activity boundary has been drawn to coincide with the boundary of the petroleum title area and the Operational Area. This defined boundary encompasses all operations involving the use of the seismic sound source, associated survey lines, and the physical presence of the source and support vessels during acquisition (Section 3). Two supporting operations essential to the effective implementation of fauna management measures will be conducted outside the petroleum activity boundary:

1. **Marine Fauna Spotter Vessel Operations:** A dedicated spotter vessel will operate at variable distances beyond the activity boundary to visually detect marine fauna, particularly cetaceans, in accordance with defined performance standards and shutdown procedures. Its role is to support implementation of control measures designed to reduce risk of exposure to underwater sound and ensure impacts are reduced to ALARP and acceptable levels.
2. **Deployment of Passive Acoustic Monitoring Buoy(s):** One or more autonomous acoustic monitoring devices may be deployed outside the activity boundary in fixed locations to supplement visual monitoring and detect exceedances of ambient sound levels.

While both the spotter vessel and PAM buoy(s) are located outside the defined boundary of the petroleum activity, these operations are functionally and operationally integral to the conduct of the petroleum activity as described in this EP. These operations:

- Are necessary for the management of environmental risks associated with the petroleum activity, particularly underwater sound exposure to marine fauna.
- Are being carried out in connection with the exercise of a right under a petroleum title, and do not constitute standalone works or independent research activities.
- Are not being undertaken for the purpose of acquiring data to discover, evaluate, or assess the commercial potential of petroleum resources, and therefore do not constitute ‘exploration’ as defined under section 19 of the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGS Act).
- Do not require a separate petroleum title or access authority under the OPGGS Act.
- Have been fully described and assessed within the impact and risk assessment sections of this EP, including all environmental impacts and risks associated with their off-boundary location.

As such, while no separate title is required for these support operations (consistent with section 19 of the OPGGS Act and NOPTA’s guidance on the extended meaning of “explore”), the associated impacts and risks have been fully described and assessed in this EP.

Map 168 (MAP-REG-EPM-168) shows the Operational Area and the Support Operations Area (**SOA**) to illustrate the petroleum activity boundary and the indicative zones in which the spotter vessel and buoy may be deployed. It represents an area 23 km from the Active Source Area, clipped to the Operational Area on the southern boundary, and extended to the boundary of Commonwealth waters to the north of the survey.

CGG’s consultation approach of total transparency ensured that relevant persons were consulted in relation to these support operations prior to the formal definition of the SOA. While these operations are not part of the petroleum activity as defined under Regulation 5 of the Environment Regulations, they were disclosed in consultation materials and discussed with potentially affected parties to

ensure transparency regarding their purpose and location. No material concerns were raised in relation to these support operations, and the recent delineation of the Supporting Operations Area reflects updated guidance and improved clarity, rather than a change in the nature or scope of the activity consulted upon.

4.2 Activity Limitations

Following consultation with relevant persons, and completion of the environmental assessments, the following activity limitations have been adopted. These activity limitations have been referred to throughout the environmental assessment, consultation, and public comment processes.

Activity Limitations Relevant to Protecting Environmental Values and Sensitivities

1. No seismic acquisition within 17 km of Deen Maar / Lady Percy Julia Island. [2]
2. No anchoring permitted within the operational area to eliminate benthic disturbance.
3. In September, October, November or December, the acquisition lines will be acquired working from the deepest lines first.[3]
4. Operate the sound source at low power during line turns and if transiting between sail lines anywhere in the Mitigation Source Area, Active Source Area, and Survey Acquisition Area.[4]
5. The seismic vessel will operate at up to 6 knots speed over ground during acquisition.[5]
6. Data acquisition will follow along the 293°/113° azimuth orientation.[6]
7. No petroleum activity to be carried out between 1 January and 15 September.
8. Only commence lines 1 -30 after 1 November and if SRW are confirmed to have been absent from the reproduction BIA (between and inclusive of Cape Bridgewater and Cape Otway) for 24-hours .[7]
9. No vessel movements in between Deen Maar/Lady Percy Julia Island and the mainland.

Activity Limitations Relevant to Protected Areas

10. No discharge of the sound source within the West Tasmania Canyons KEF.
11. No discharge of the sound source within the Bonney Upwelling KEF.
12. Bunkering operations will not occur within 50 km of a Commonwealth or State marine park.
13. Ballast water exchange activities will be conducted outside of Marine Protected Areas.
14. No vessel movements within 5 km of the Twelve Apostles State Marine Park.[8]
15. No activities within a designated Australian Marine Park (State and Commonwealth).

[2] 17 km is based on the furthest distance from the Active Source Area to Deen Maar. It was set as a more tangible limitation beyond the 50 m bathymetry contour which moves and differs across datasets. It also covers relevant effects to other values such as pinnipeds and divers.
[3] The deepest line is the most southerly line (i.e. from line 67, see Mapp 088). Measure designed to mitigate interactions with Blue Whales who might traverse the intended MSS area as they move towards their summer feeding grounds recognising historical feeding patterns and timing.
[4] As requested by the Director of National Parks.
[5] Measure adopted to minimise risks of collisions with marine fauna.
[6] This aligns with the modelled approach ensure impacts are as predicted by the sound propagation modelling.
[7] This measure has been adopted following further assessment (Appendix F3) related to managing predictive uncertainty associated with behavioural disturbance to SRW in the reproduction BIA.
[8] 5 km is based on a reasonable buffer to reduce IMS risks to the park values following consultation with Parks Victoria.

Activity Limitations Relevant to Compliance

16. The sound will not be emitted above the stated capacity.
17. The sound source will not be discharged at full power while stationary.

Activity Limitations Relevant to Protecting Other Marine Users

18. Excise areas of the acquisition area that have been identified to cause exceedances of safe diving thresholds.[9]
19. In waters deeper than 200 m, interfere with commercial fishers to no greater extent than is necessary for the efficient completion of the survey.[10]
20. No MSS acquisition beyond 200 m depth contour.[11]
21. No vessel movements within 700 m of fishing blocks G12, G13, H13, and H14.[12]
22. No vessel movement within 4 nautical miles of the coast, except in case of emergency.[13]
23. No sound source discharges within the Orange Roughy research program areas.[14]

[9] [Sentence has been updated in response to Matter F17].

[10] Measure adopted to manage interference with trawl fishers subject to their cooperation.

[11] Measure adopted to manage interference with trawl fishers and to protect commercial target fish and invertebrate species in this area.

[12] 700m is based on the no effect distance for invertebrates, the target species of the fisher in these blocks.

[13] This limitation ensures no overlap with local yacht races and was set before the depth contour limitations. This means that there is further distance between the activity and the local yacht races.

[14] This limitation was adopted following consultation with the trawl fishing industry association.

5 Document Control

Table A2-6 - Revision history

Version	Date of Revision	Author/Reviewer	Summary of Changes
0.0	24 March 2023	MS	Initial version taken from Activity Overview flyer which was published 1.2.23.
0.1	29 March 2023	LT/PR	Review by CGG.
0.2	30 March 2023	MS	Updated following CGG review.
1.0	31 March 2023	MS	Published on Regia MSS Consultation Hub website.
1.1	30 June 2023	MS	Updated following consultation to include commitments for activity limitations (not published).
1.2	14 September 2023	MS	Updated following completion of impact and risk assessments to add further activity limitations. Also added the proposed active source area and operational area (not published).
1.3	26 September 2023	PR/LT	CGG Review.
2.0	30 September 2023	MS	Published on Regia MSS website.
2.1	31 October 2023	MS	Updates to include refined activity limitations following consultation.
3.0	29 December 2023	MS	Reviewed following updates to Appendices D1 – D4 and E1 – E10. Preparation for submission to NOPSEMA for public comment.
4.0	11 May 2024	MS/PR/LT	Additional activity limitations added because of passage of time, new literature, public comments, and revision of the EP. Also added spotter vessel to marine spread.
5.0	31 October 2024	MS/PR/LT/DT	Updated following NOPSEMA assessment and inclusion of the survey acquisition area.
6.0	16 April 2025	MS/PR/IB/PS	Updated following NOPSEMA OMR 1 Letter
7.0	23 June 2025	MS/IB	Alignment of ASA, OA, and MSA text.
8.0	17 November 2025	MS/CT/RH	Updated to reflect the lower source, removal of the April – June operational window, removal of the first two weeks of September, feedback about transducer usage, and other consequential changes because of responding to the OMR letter.

Annex 1

Public Comment

Table A2-7 shows how the Matters raised during public comment have been incorporated into the EP in this document.

Table A2-7 - List of changes arising from public comment matters

Matter	Matter ID	Changes made arising from public comment
Matter: Impacts to dive-based fisheries	F17	CGG has considered this claim and, based on the updated secondary sound modelling, has updated EP Appendix E8 (Impact Assessment – Underwater Sound: Surfers, Divers and Swimmers), Appendix A2 (Description of the Activity) and M#01: Activity limitation, to reflect that the sound source will not be discharged at full power from areas which have been predicted to result in an exceedance of the safety criterion human health safety criterion for recreational divers, surfers and swimmers along the coastline. CGG has also made updates to modelling in Appendices (E1, E2, E3, E4, E5, E6, E7, F1 F3, and G1.).

Annex 2

Objections and claims raised through consultation

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
4097	Excising Giant Crab and Southern Rock Lobster habitat within the canyons as necessary to reduce impact to these species.	The titleholder responded with information relating to the exclusion zone that will be implemented: No acquisition within the West Tasmania Canyons KEF. (Event ID: 1751)	653
4144	Off-shore Portland is special and needs protection from seismic interference	There are a variety of environmental protections in place for the offshore Portland area. There includes activity limitations found in A2 and measures adopted to manage each environmental aspect of the activity best reviewed in Annex 2 of the EP Summary.	3021
4171	Seismic array to operate at low power during line turns to minimise the risk of SRW and BW entering the zone of potential TTS or behavioural disturbance during shut down.	The titleholder responded with an explanation that this is a standard control and will be implemented as will soft starts of the seismic source after completing a line turn. (Event ID: 1751)	653
4172	Seismic array to operate at low power during line turns to minimise the risk of SRW and BW entering the zone of potential TTS or behavioural disturbance during shut down.	The titleholder responded with an explanation that this is a standard control measure and will be implemented along with soft starts of the seismic source after completing a line turn (Event ID 1751).	1751
4185	Significant risk to the ecologically sensitive Bonny upwelling.	The titleholder provided a justification for the need for petroleum activities under the current government policy and provided information on how the survey has been designed the to ensure potential impacts are reduced to acceptable levels (Event ID 2630).	4808
4226	The email expresses concern about the adverse effects of blasting the Southern Ocean and its creatures, particularly mentioning the geologically sensitive Bonney upwelling.	Title holder has undertaken a thorough analysis and assessment of all relevant literature to inform its decisions. The MSS will not impact the population stability of any taxa within the area of operation. Mitigation plans are in place to reduce any impacts to as low as practicable.	2940

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4232	The feedback expresses frustration over repeated seismic blasts in the same area, emphasising the significant environmental impacts associated with these activities. It calls for accountability from NOPSEMA to prevent future occurrences, highlighting the ongoing threat to the environment.	The Regia MSS is targeting areas that have not been surveyed before though we acknowledge there may be some overlap with previous surveys. We must show that the environmental impacts are short-term, localised, or recoverable and that they are controllable with appropriate measures in place.	2104
4245	The fisher objected to seismic activities, noting adverse impact on the local fishing industry. He described how seismic activities have driven other fishers away, and he thinks he is the last remaining commercial fisher out of Port Campbell.	CGG acknowledges that the fishing industry has few vessels now than historical averages. CGG studied the catch history block by block in the region and found more than 70% of SRL catch was from inshore waters. This led to depth exclusions for the survey. Further, for this fisher, they shared that they fish only in blocks near to Port Campbell. Therefore, CGG decided to exclude all activities from these blocks.	2026
4279	The stakeholder expresses concern that the proposed seismic blasting will disrupt the travel paths of whales, particularly after efforts have been made to allow their populations to recover. They emphasise the potential harm to these animals from creating explosions in their migratory routes, arguing against any activities that threaten their sustainability.	We are working hard to design our survey so that we limit our impacts to acceptable levels. Our activity is no more than 90 days, so we'll find an appropriate window to operate in. We will not destroy any wildlife habitat because of our activity (Event ID 2109).	2109
4283	The stakeholder noted concern about the impact of the project on the Twelve Apostles Marine Park.	There will be no activities within the Twelve Apostles Marine Park and consultation with Parks Victoria has resulted in a limitation to avoid the park.	2282

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4290	The stakeholder raised a concern during an in-person meeting with the titleholder. The stakeholder fishes for Giant Crab and Blue-eyed Trevalla to a depth of 90-200 fathoms (+200m). The stakeholder's concerns were in relation to interference with all year-round fishing activities and the Giant Crab spawning activity September – November each year.	CGG has agreed to avoid the +200m area for acquisition and minimise it operation time in these depths.	4076
4298	The stakeholder stated Australia has adequate gas reserves and was concerned that exploration was to take place in a region that is a whale sanctuary and unspoiled.	We understand community views about the ongoing need for gas in Australia (or lack thereof) as the country navigates the energy transition. The current government policy is that more gas is needed, and petroleum exploration titles continue to authorise the exploration process, including seismic surveys. Matters of national energy policy are not within the purview of CGG or the Regia MSS. We will register claims related to the ongoing need for gas and provide those to NOPSEMA. We also advise that these concerns are better directed to your State or Federal members of parliament and/or the State or Federal Resources Ministers. The Otway Basin has been one of Australia's largest producing gas fields since the 1980's, servicing both domestic and commercial energy needs for the East Coast. It is for this reason that the government has awarded titles for further exploration.	1747
4360	The Stakeholder noted concerns about the impacts of activity on the view.	The titleholder acknowledged this concern, regarding the disruption of ocean view, the titleholder advised the stakeholder the seismic survey vessel activity will be limited to a maximum of 90 days, during which it will be in continuous movement in the activity area. It will be approximately 7nm offshore, at its closest point, with the rest of the survey much further offshore. The Regia MSS will not impact the view of the ocean.	970

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4226	The email expresses concern about the adverse effects of blasting the Southern Ocean and its creatures, particularly mentioning the geologically sensitive Bonney upwelling.	Title holder has undertaken a thorough analysis and assessment of all relevant literature to inform its decisions. The MSS will not impact the population stability of any taxa within the area of operation. Mitigation plans are in place to reduce any impacts to as low as practicable.	2940
4491	Claims about the SRW and BW BIAs. States proposed activity will cause unacceptable impacts to all Karntubul species, including temporary & permanent hearing loss, displacement from BIAs, vessel strike, prey depletion during peak feeding/migration period, calving interruption, and impact to ecosystems and cultural landscapes as a result of the cumulative impact of these.	CGG has identified all Biologically Important Areas (BIAs) relevant to blue whales (BWs) and southern right whales (SRWs) and incorporated seasonal BIA use into the survey design through substantial temporal and spatial restrictions detailed in the EP. Predicted underwater-sound impacts on these Karntubul species, along with mitigation measures presented in Appendices E7 and F3, demonstrate impacts will remain acceptable and will avoid auditory impairment or displacement from BIAs or Habitats Critical to Survival (HCTS). CGG further notes that vessel-strike risk is already extremely low during seismic surveys and that additional controls in Appendix D2 ensure this risk is prevented and acceptable. It concludes that no changes to ecosystem structure, diversity, or function are expected from the one-off survey, with sound exposure too limited in extent and duration to affect prey, food webs, or predator–prey relationships. A cumulative impact assessment found residual cumulative effects to be low, reduced to ALARP, and acceptable, with no impacts predicted for regional marine parks. CGG also asserts consistency with the National Recovery Plan for Southern Right Whales and the Blue Whale Conservation Management Plan, stating that their objectives and recommended measures have been incorporated. Finally, CGG maintains that all marine mammal species likely to occur in the region have been adequately assessed using up-to-date EPBC Protected Matters data, and that mitigation measures ensure impacts to all listed species will remain acceptable and not inconsistent with EPBC Act protection provisions.	EVT352

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4492	Claims that the eastern population of the Southern Right Whale, estimated at only 200–300 individuals, is at particularly high risk because its migration and reproduction Biologically Important Areas (BIAs) overlap directly with CGG's Operational Area and sound propagation footprint. According to the Southern Right Whale Recovery Plan, these whales use the affected region for reproduction between May and September and for migration between April and October. The Recovery Plan also notes that Southern Right Whales do not feed in coastal waters but are expected to feed, and possibly conceive, within the Australian Whale Sanctuary—an area entirely overlapped by the proposed Regia MSS activity. As a result, the seismic survey could occur within, or affect, conceiving, calving, and feeding grounds for this critically endangered sub-population. The species is particularly vulnerable to human impacts due to its low reproductive rate, long lifespan, and strong site fidelity to key habitats. The submission therefore emphasises the relevance of underwater noise, habitat degradation, and vessel-strike risks in the context of the proposed seismic activities.	The Recovery Plan explains that BIAs can be designated for key behaviours such as reproduction, foraging, migration, and resting. While Southern Right Whale BIAs in the Plan cover reproduction and migration, the Plan notes that foraging occurs across a much broader offshore latitudinal range (30°S–65°S) and is not linked to these BIAs. Because the Regia MSS is not located in Antarctic waters, it will not affect cetaceans that forage there. CGG states the survey will avoid peak SRW abundance in the mapped BIA and apply mitigation measures to ensure no SRWs are harmed, injured, or interfered with.	EVT352

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4496	GMTOAC objects to CGG removing a previous control measure limiting seismic discharge in the Pygmy Blue Whale foraging BIA during periods of low whale presence, replacing it with a vague condition requiring CGG to determine whether whale presence is "compatible" with proceeding. GMTOAC argues this new measure lacks detail on how whale presence or "unacceptable disturbance" will be assessed, and that it fails to reference Recovery Plans which define unacceptable impacts. GMTOAC warns that the proposed survey timing (April–June 2026) coincides with peak Pygmy Blue Whale foraging season and Southern Right Whale migration and calving periods, meaning the seismic survey is likely to occur when both species are using their BIAs. Preventing whales from accessing these areas, or exposing them to injury while they remain, would constitute unacceptable impacts inconsistent with Recovery Plan objectives.	CGG has further reduced the likelihood of interactions with marine mammals by excluding the April–June period and commencing the survey only after 16th September. Because blue whales typically do not arrive from Western Australia until November, CGG argues that most of the survey will occur when blue whales are absent from the area. It adds that sighting data show very few blue whales in November and December, with peak abundance occurring later, from January to March during the Bonney Upwelling.	EVT352

4503	GMTOAC claims inconsistencies and contradictions within CGG's April 2025 EP, particularly regarding the enforceable activity limitations intended to reduce risks to Southern Right Whales and Blue Whales. GMTOAC notes that NOPSEMA previously identified this issue in 2024, stating that duplication and inconsistencies left "no single source of truth" for assessing the EP. GMTOAC believes this fundamental flaw remains unresolved in the April 2025 version, undermining the reliability and enforceability of CGG's proposed control measures. GMTOAC provided the following examples: • Although the EP states that Appendix A2 contains the "final" list of enforceable activity limitations, it later states that Appendix G1 is "controlling" and overrides other lists. GMTOAC notes that many measures appear in one appendix but not the other, and others contain conflicting descriptions. For example, Appendix A2 and Appendix G1 both outline conditions for discharging the sound source in the Southern Right Whale reproduction BIA, but the conditions differ in scope and detail. GMTOAC warns that such internal discrepancies create confusion for vessel crews and contractors and could jeopardise the species the measures are intended to protect. • GMTOAC highlights conflicting and unclear role descriptions across appendices, particularly for key positions such as the Survey Environment Advisor and Environmental Officer. Responsibilities differ between Appendix G1 and G2, creating uncertainty about who is accountable for shutdowns, communication, monitoring, aerial surveys, technology trials, and 24/7 oversight. GMTOAC notes that the EP does not clarify whether multiple staff will be appointed to fulfil these demanding roles. • Several measures appear in one appendix but not another. For instance, Appendix G2 requires pre-survey aerial surveys, but this requirement is	CGG rejects claims of inconsistency between Appendices A2, G1 and G2, however the stakeholder may have misunderstood the distinction between activity limitations and control measures. Appendix A2 sets enforceable activity limits, measures that restrict operations to avoid or reduce impacts—while Appendix G1 details the control measures, performance standards, and procedures used to implement those limits in line with NOPSEMA's definition of controls. A2 and G1 serve different but complementary purposes, with A2 defining mandatory constraints and G1 outlining the operational steps required to meet them, together ensuring SRWs are protected from behavioural disturbance. G1 and G2 are also complementary rather than conflicting: G2 defines roles and responsibilities, while G1 outlines the controls and measurement criteria used to verify them. CGG maintains that the Environmental Officer and Survey Environment Advisor roles are clearly aligned across both appendices, collectively providing continuous oversight, shutdown authority, monitoring coordination, and expert engagement. CGG also notes that activity-level commitments, such as drone and satellite detection trials, rightly sit in G1, while position-specific duties like aerial surveys sit in G2. It states that the EP is intentionally structured so A2, G1 and G2 each fulfil distinct functions within an integrated management system, providing operators with clear instructions, objective decision-making criteria, and independent oversight from the Expert Panel. CGG concludes that this framework ensures transparent, robust management and effective protection of Southern Right Whales and Pygmy Blue Whales.	EVT352

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	absent from the controlling Appendix G1. Similarly, Appendix G1 includes commitments to trial drone and satellite detection technologies, but these are not included in the Fauna Management Plan, leaving unclear whether they are required or how their effectiveness will be assessed. • GMTOAC claims that these inconsistencies make it difficult, if not impossible, for operators to understand or correctly implement the required measures, with potential serious consequences for Nyamat Mirring, its ecosystems, and culturally significant species such as Southern Right Whales and Pygmy Blue Whales. They also express concern that CGG's qualitative measures, such as determining whether disturbance is "acceptable", lack objective criteria and fail to involve the Whale Expert Panel or reference Recovery Plan standards.		

4504	GMTOAC objects to the weakening and inconsistency of shutdown measures between the November 2024 and April 2025 versions of CGG's EP. The earlier EP committed to shutting down the sound source if any whale was within 2 km (with larger buffers for Southern Right and Blue Whales), but the April 2025 EP introduces a much smaller 500 m shutdown zone for most whales, which GMTOAC argues increases the risk of exposure to harmful sound levels. GMTOAC notes that the April 2025 EP creates confusion by implying that CGG's "shutdown zone" is actually a 2 km low-power zone, despite providing no explanation of what "low-power" means, what sound levels it produces, or how continuous low-power operation affects Karntubul, other cetaceans, or cumulative noise exposure. This contradicts Appendix G2, which states CGG will use a shutdown zone rather than a low-power zone, consistent with EPBC Policy Statement 2.1. GMTOAC warns that such internal contradictions undermine the reliability and enforceability of mitigation measures. GMTOAC questions CGG's assumption that a 10 km behavioural shutdown zone will protect Blue Whales, given scientific uncertainty about behavioural impact distances. They highlight evidence that seismic noise can mask baleen whale calls across thousands of kilometres, that ambient noise levels can be elevated by 25 dB over 40 km from air-gun operations, and that reverberated pulses can create near-continuous noise for months. GMTOAC argues that such persistent elevated noise levels could impair communication, migration, and calf–mother cohesion, posing cultural and ecological harm, and that CGG's 10 km buffer is therefore not precautionary. GMTOAC is also concerned about ambiguity over whether shutdown means turning the source off or merely reducing power, noting that this	All relevant details of the sound source, including low-power mode, is in Appendix A2. We have also committed to a full shutdown if any whale enters the 2 km shutdown zone, far more precautionary than the EPBC Policy 2.1 requirement of a 2 km low-power zone and a 500 m shutdown zone. This approach exceeds industry standards and legislative requirements for mitigating potential impacts from seismic sound sources. Our EP applies a suite of measures designed to ensure impacts to Blue Whales and Southern Right Whales remain at acceptable levels. We will shut down the sound source immediately upon detection of any SRW, including cow–calf pairs, and we will manage to ambient sound levels in the SRW reproduction BIA to ensure those levels are never exceeded. The Regia MSS is a short, temporary activity, 90 days in total, including 60 days of acquisition, so any increase in ambient noise will be brief and localised. No exceedance of ambient sound levels will occur in the SRW reproduction BIA during the reproductive season, ensuring cow–calf pairs are not exposed to elevated noise or displaced from critical habitat. Our shutdown zones include highly conservative buffers well beyond standard requirements, further reducing potential impacts. Collectively, these measures ensure any short-term noise increases are managed to acceptable levels, consistent with the precautionary intent of relevant recovery plans. Appendix B8 addresses acoustic masking using recent scientific literature, not the older references cited by GMTOAC. For example, Nieukirk et al. (2012) showed that airgun signals detected thousands of kilometres from fin whales were unlikely to have direct effects, with the most probable impact being reduced communication range. Even then, the study had major limitations, including uncertainty about the actual distance between vocalising whales and receivers. Key context from Estabrook et al. (2016) is omitted, which analysed multiple seismic surveys over multiple years. That study does not represent received levels for animals closer to the sound source and therefore is not applicable to the Regia MSS. No other seismic	EVT352

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	ambiguity is not precautionary and risks behavioural impacts for Blue Whales.	surveys are currently planned in the Otway region, further limiting the relevance of that study's conclusions	