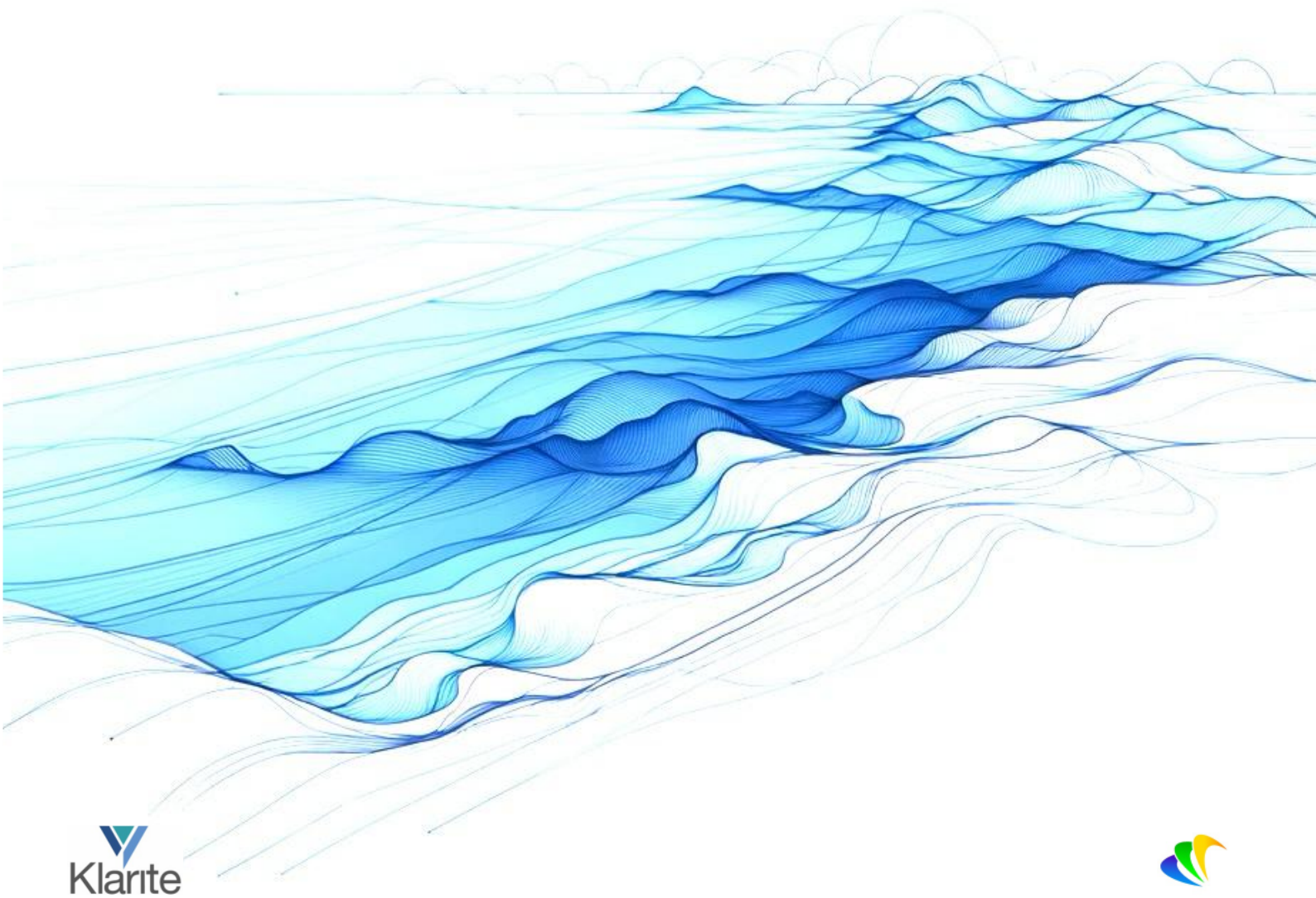
REGIA
Marine Seismic Survey

Risk Assessment
Collision with Marine Fauna

Appendix D2: REG-EP-017-D2

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Klarite

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1 Introduction

Collisions with marine fauna was identified through the Preliminary Environmental Impact and Risk Assessment (**PEIRA**) (Appendix B4) as an aspect needing further assessment. Hence, this document presents a detailed examination of **Collisions with Marine Fauna** as a risk pathway between the Regia Marine Seismic Survey (**Regia MSS**) and the existing environment that may be affected by that aspect.

1.1 Purpose and Scope

The purpose of this document is to assess all acceptable sources of information to provide clear outcomes around levels-of-impact, and any associated mitigation and management measures that may be needed.

This assessment is the second stage of the environmental assessment. Its purpose is to rank the impact according to the criteria set out in the Environmental Assessment Process found in Appendix B3. The purpose of this stage of the assessment is to demonstrate that the impact can be managed to an acceptable level through the adoption of mitigation measures and the setting of an appropriate environmental performance outcome.

The measures adopted because of consultation and because of the assessment will be carried through to the ALARP assessment which occurs in stage three of the overall assessment process. Recommendations will be made if there is any further assessment required in the third stage of the assessment.

1.2 Consultation in Preparation of the EP

This document was first published in draft form to the Consultation Hub on 11 September 2023. This was done to acknowledge that the final full Environment Plan (**EP**) can be a large document that is difficult for readers to digest in the 30-day public comment period. As such, the public and relevant persons were invited to comment on the document with an explicit request for readers to provide feedback on:

- The accuracy of the described environment that may be affected.
- Any omissions of environmental values and sensitivities relevant to the environmental aspect.
- Any errors or omissions of scientific/peer reviewed literature that should be considered.
- Any errors or omissions of relevant legislation or documents of standing that should be considered.
- Any further mitigation or management measures that should be considered.

Up to 22 December 2023, there were no specific comments received on the content of the document.

2 Aspect – Collisions with Fauna

2.1 How the Aspect Occurs

The presence of the seismic and support vessels and towed equipment provides a risk of collision or entrapment of marine fauna potentially causing injury or mortality.

2.2 Extent and Duration of the Aspect

Duration: 90 days

Extent: Operational Area

The extent of the area where the risk of a vessel collision with marine fauna may occur is within the Operational Area and the risk could occur while the activity is undertaken.

3 Cause-Effect Pathway

The PEIRA (Appendix B4) identified a cause-effect pathway for collisions with fauna for the following environmental components and their social, cultural, and economic features:

- Marine reptiles
- Marine mammals
- Fish
- People and communities

There have been no reported cases of marine fauna becoming entangled in seismic survey streamers in Australian waters. As the streamers are towed, they have a level of tautness that would not result in entanglement of fauna. Thus, there is no cause-effect pathway for entanglement of fauna in streamers.

Historically, turtles have been recorded as becoming trapped in the streamer tail buoys. Tail buoys are now of a design that does not represent an entrapment risk to turtles. In addition, where a tail buoy is not of the newer design, turtle guards are used as standard equipment. Thus, there is no cause-effect pathway for entrapment of turtles in streamer buoys.

The National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Megafauna (CoA 2017a) identifies cetaceans, dugong, marine turtles, and whale sharks as being vulnerable to vessel collisions. Though vessel collisions with marine fauna occur within Australia they have not been reported during seismic surveys.

The National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Megafauna did not identify pinnipeds as vulnerable to vessel collisions, and there were no BIAs for pinnipeds identified in the PMST searches. As a result, pinnipeds are not assessed further.

Fish being identified as vulnerable to vessel collisions is specifically related to Whale Sharks who fit a similar collision profile to cetaceans. However, the PMST report verified whale sharks are not found in this region, so fish are not assessed further.

4 Description of the Existing Environment that May be Affected by the Activity

As detailed in the Section Extent and Duration of the Aspect, the Operational Area has been adopted as the extent of the area within which a collision with marine fauna may occur. To identify the presence of those species that may be at risk of vessel collision (cetaceans, dugong, marine turtles, and whale sharks) a Protected Matters Search (PMST) was undertaken for the Operational Area with the report available in Appendix B5.

The PMST Report identified that cetaceans and marine turtles may be present within the Operational Area while dugongs and whale sharks will not. Annex 3 details those species and identifies any biologically important areas and conservation advice or management plans.

PMST searches were run again prior to resubmission to ensure any changes to species or listings were identified to control for passage of time. There are no changes to protected matters information for species that may be at risk of vessel collision [Section added in response to Matters: I16 and I17].

4.1 Turtles

The PMST Report identified three turtle species, which may (*Chelonia mydas* - green) or are likely (*Dermochelys coriacea* - leatherback and *Caretta caretta* - loggerhead) to occur within the Operational Area. No BIAs or habitat critical to the survival of the species were identified.

4.2 Marine Mammals

4.2.1 Cetaceans

The PMST Report identified several cetacean (whales and dolphin) species that are known or are likely to occur within the Operational Area. Table D2-1 details those species that were identified as having biologically important areas or biologically important behaviours identified within the Operational Area.

Table D2-1 - Cetacean Species Biologically Important Behaviours and/or BIAs within the Operational Area.

Receptor	Biologically Important Behaviour
Blue Whale	Foraging, feeding or related behaviour known to occur within area
	Foraging (annual high use area) BIA (Appendix B12 MAP-REG-EPM-068)
Fin Whale	Foraging, feeding or related behaviour known to occur within area
Pygmy Right Whale	Foraging, feeding or related behaviour likely to occur within area
Sei Whale	Foraging, feeding or related behaviour known to occur within area
Southern Right Whale	Breeding known to occur
	Migration BIA (Appendix B12 MAP-REG-EPM-069)

4.2.1.1 Blue Whale

The Blue Whale (*Balaenoptera musculus*) is listed as an endangered species under the EPBC Act. There are two subspecies of blue whales that use Australian waters (including Australian Antarctic waters), the Pygmy Blue Whale (*B. m. brevicauda*) and the Antarctic Blue Whale (*B. m. intermedia*). The Otway region, where the Operational Area is located, is an important migratory and foraging area for Blue Whales, as shown by passive acoustic monitoring and aerial surveys (Gavrilov 2012, McCauley et al. 2018, Gill et al. 2011). Underwater acoustic monitoring programs have detected Antarctic and Pygmy Blue Whale calls in the Otway Region (McCauley et al. 2018).

Important foraging grounds for Blue Whales include the Great Australian Bight, South Australia, and off Portland, Victoria. Research to date has found that Pygmy Blue Whales occupy the western area of the Bonney Upwelling system in the Eastern Great Australian Bight and adjacent to the Kangaroo Island canyons from November and December (DoE 2015c). Pygmy Blue Whales then move south-east to the Bonney Upwelling system off eastern South Australia and Victoria (e.g., between Robe, SA and Cape Otway, Vic). This occurs predominately between January to April (DoE 2015c).

The Blue Whale was extremely abundant until the early 20th century when they were hunted to near extinction. Approximately 341,830 Blue Whale takes were recorded by commercial whaling in the Antarctic and sub-Antarctic in the 20th century, of which 12,618 were identified as Pygmy Blue Whales (Branch et al. 2004). The current global population of Blue Whales is uncertain but is plausibly in the range of 10,000 to 25,000, corresponding to about 3-11% of the 1911 estimated population size (Reilly et al. 2008).

The Operational Area is within the foraging (annual high use) BIA where blue whales predominately occur between January to April (DoE 2015c) (Appendix B12 MAP-REG-EPM-068).

4.2.1.2 Fin Whale

The Fin Whale (*Balaenoptera physalus*) is a cosmopolitan migratory species that is listed as vulnerable and occurs from polar to tropical waters but is rarely sighted in inshore waters. Fin Whales show well defined migratory movements between polar, temperate and tropical waters which are essentially north–south with little longitudinal dispersion.

While Australian Antarctic waters are important feeding grounds for Fin Whales, the species also feeds in the Bonney Upwelling during summer/autumn sometimes in the company of Blue and Sei Whales (DCCEEW 2023b). Areas of upwelling and interfaces with mixed and stratified waters may be an important feature of Fin Whale feeding habitat with the species feeding on planktonic crustacea, krill, some fish and cephalopods (DCCEEW 2023b). Fin Whales frequently lunge or skim feed at or near the surface and they are known to dive to 230 m to feed.

There are no BIAs for the Fin Whale within Australian waters. Fin Whales are likely to be foraging in the Operational Area at similar time as Blue Whales, predominately occur between January to April.

4.2.1.3 Pygmy Right Whale

The Pygmy Right Whale (*Caperea marginata*) is a little-studied baleen whale species that is found in temperate and sub-Antarctic waters in oceanic and inshore locations. No population estimates are available for Pygmy Right Whales globally, or in Australian waters (DCCEEW 2012c). The species has never been hunted commercially and is listed as a migratory species under the EPBC Act.

Species distribution in Australia is found close to coastal upwellings and the Subtropical Convergence may be important for regulating distribution (Bannister et al. 1996). Key locations include south-east Tasmania, Kangaroo Island (SA) and southern Eyre Peninsula (SA) close to upwelling habitats rich in marine life and zooplankton upon which it feeds (Bannister et al. 1996).

There are no BIAs for the Pygmy Right Whale within Australian waters. Pygmy Right Whales are likely to be foraging in the Operational Area at similar time as Blue Whales, predominately occur between January to April.

4.2.1.4 Sei Whale

The Sei Whale (*Balaenoptera borealis*) is listed as vulnerable under the EPBC Act. Sei Whales are considered a cosmopolitan species, ranging from polar to tropical waters, but tend to be found more offshore than other species of large whales. Sei Whales move between Australian waters and Antarctic feeding areas; subantarctic feeding areas (e.g. Subtropical Front); and tropical and subtropical breeding areas. The proportion of the global population in Australian waters is unknown as there are no estimates for Sei Whales in Australian waters.

In Australia, Sei Whales occur within Australian Antarctic Territory waters and Commonwealth waters, and have been infrequently recorded off Tasmania, NSW, Queensland, the Great Australian Bight, Northern Territory and Western Australia (Parker 1978, Bannister et al. 1996, Thiele et al. 2000, Chatto and Warneke 2000, Bannister 2008).

Sightings of Sei Whales within Australian waters includes areas such as the Bonney coast upwelling off South Australia (Miller et al. 2012), where opportunistic feeding has been observed between November and May (Gill et al. 2015).

There are no BIAs for the Sei Whale within Australian waters. Sei Whales are likely to be foraging in the Operational Area at similar time as Blue Whales, predominately occur between January to April.

4.2.1.5 Southern Right Whale

The Southern Right Whale (*Eubalaena australis*) is listed as endangered under the EPBC Act. Southern Right Whales were depleted to less than 300 individuals globally due to commercial whaling in the 19th and 20th centuries (Tormosov et al. 1998). They were protected from whaling in 1935 however, due to illegal whaling in the 1970s and because Southern Right Whales have a slow rate of increase (7% per annum) compared to other marine mammals, their numbers remain low (IWC 2013). Global abundance estimates are 13,000 for the species, across key wintering grounds in South Africa, Argentina, Australia and New Zealand.

Southern Right Whales are distributed in the Southern Hemisphere with a circumpolar distribution between latitudes of 16°S and at least 65°S. They migrate from southern feeding grounds in sub-Antarctic waters to Australia in between May and November to calve, mate and rest (Bannister et al. 1996, DCCEEW 2024). They are distributed across thirteen primary aggregation areas along the southern coast of Australia. In Australian coastal waters, they occur along the southern coastline of the mainland and Tasmania and generally extend as far north as Sydney on the east coast and Perth on the west coast (CoA 2012). There are occasional sightings further north, with the extremities of their range recorded at Hervey Bay and Exmouth (CoA 2012).

The largest established calving areas in Australia include Head of Bight in SA, and Doubtful Island Bay and Israelite Bay in WA. Smaller but established aggregation areas regularly occupied by Southern Right Whales include Yokinup Bay in WA, Fowlers Bay in SA and the Warrnambool and Portland in Victoria. Emerging aggregation areas include Flinders Bay, Hassell Beach, Cheyne/Wray Bays, and Twilight Cove in WA, and sporadically occupied areas include Encounter Bay in SA (CoA 2012). Southern Right Whales generally occupy shallow sheltered bays within 2 km of shore and within water depths of less than 20 m (Charlton et al. 2017).

The Operational Area overlaps the Southern Right Whale Migration BIA where the whales are present between April and October (AMSIS 2025, formerly National Conservation Values Atlas (NCVA)) (Appendix B12 MAP-REG-EPM-069).

4.3 People and Communities

4.3.1 Social and Economic Features

During consultation, as presented in Annex 2, objections and claims were raised regarding concerns of impacts on the local fauna, which may impact tourism and local enjoyment of the area, including whale and their habitat.

4.3.2 Cultural Features

During consultation, the cultural significance of marine mammals, such as the Southern Right Whale, Blue Whale, Killer Whale, seals, sea lions and dolphins were highlighted, with connections to songlines, totemic value and kinship, and cultural practices (Appendix F3, Section 3.16.1).

5 Relevant Legislative and Other Requirements

CGG has considered all the relevant legislative requirements, which apply to collisions with marine fauna (see Appendix B2). Measures that will be adopted to demonstrate how these requirements will be met are as follows:

- The procedures in the Fauna Management Plan details how the requirements of EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with Cetaceans and EPBC Act Policy Statement 2.1 will be met. These measures include:
  - A 300 m caution zone for whales.
  - A 150 m caution zone for dolphins (except for those bow riding).
  - A 150 m caution zone will also be applied to pinnipeds, as it is feasible that they can be detected by MFOs at 150 m.
  - A 150 m caution zone will also be applied to turtles as it is feasible that they can be detected by MFOs at 150 m.
- Whale and vessel strike incidents will be reported in the National Ship Strike Database Reporting as detailed in Appendix B3 Implementation Strategy.

6 Defining Acceptable Levels of Risk

Category	Defined Acceptable Level (General)	Defined Acceptable Level (Aspect Specific)	Rationale
Principles of ESD	The petroleum activity results in temporary / reversible, small scale, and/or low intensity environmental damage.	Prevent collisions with marine fauna. Prevent entrapment of turtles. Prevent collisions with Blue Whales.	Under the EPBC Act it is an offence to intentionally kill or harm a listed species. Prevention of collisions will satisfy this criterion.
	The impact and risk assessment process are based on sufficient information to understand if: Serious/irreversible environmental damage is predicted; or The application of the precautionary principle is applied in the presence of scientific uncertainty.		
	Environmental management of the activity must not be inconsistent with EPBC Act Management Plans and Recovery Plans.		
Biological	Impacts and risks to biological features will be temporary / reversible, small scale, and/or low intensity environmental damage at population levels.		
Ecological	Impacts and risks to ecological features will be temporary / reversible, small scale, and/or low intensity damage to the overall health, diversity, or functioning of the ecosystem.		
Economic	Affected persons will not be worse off because of the activity.	Industries, livelihoods, and ecosystem services remain viable, with no sustained financial or operational consequences resulting from changes in species behaviour, abundance, or access to resources.	For species and sensitivities with social, cultural and/or economic values, if the potential ecological impact or risk is deemed acceptable, it

Category	Defined Acceptable Level (General)	Defined Acceptable Level (Aspect Specific)	Rationale
Cultural	Impacts and risks to cultural features including cultural values, traditions, or practices, will be temporary / reversible, small scale, and/or low intensity.	Culturally important species, places, and practices can continue without disruption to their role, accessibility, or long-term viability.	is likely that the corresponding impact on social, cultural and/or economic values will also be considered acceptable, as the physical presence and health of these species are key for maintaining their social, economic and cultural roles. Predicted levels of impact for species that have social, cultural and economic values will be assessed on a receptor level.
Social	Measures have been adopted based on the consultation process to address relevant objections and claims of relevant persons. The views of public have been considered in the impact and risk assessment.	People and communities can continue engaging with the natural environment, recreational activities, and heritage values without experiencing long-term or irreversible disruption.	
Company	Environmental impacts and risks are consistent with the CGG impact and risk assessment process such that for an impact or risk the effect/ consequence rating is medium or below.	As per the general levels.	CGG is a company familiar with managing the effects of seismic sound on the marine environment, and its global operational history supports the reliability of its internal assessment process. The use of CGG's impact and risk matrix, when consistently applied, has not resulted in unacceptable environmental outcomes, which indicates the process produces conservative and realistic assessment outcomes.

7 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.

8 Minimisation of Risks Through Activity Design

As part of planning and design of the activity, several activity limitations were considered in accordance with the hierarchy of controls and through the consultation process (see Annex 2). These limitations were evaluated to determine whether the source of risk could be eliminated or substituted through changes in the timing, technology, or design of the activity. As described in Appendix F3, section 3.16.2, due to the interconnection between the tangible and intangible cultural values, all activity limitations are relevant to safeguarding social, economic, and cultural features and values, ensuring protection across all areas.

8.1 Elimination

Elimination involves removing the source of an impact or risk entirely through changes to the activity design. In the context of marine fauna collisions, elimination involves removing or reducing the factors that could lead to vessel strikes. One main option was considered and subsequently adopted:

The seismic vessel will operate at no more than 6 knots speed over ground during acquisition

Eliminating higher vessel speeds is intended to significantly reduce the risk of collisions with marine fauna. By operating at slower speeds, this approach ensures safer and more environmentally friendly operations. This measure has been accepted by CGG as a key component of the activity design to prevent potential harm to vulnerable species.

8.2 Substitution

Where elimination is not viable, substitution involves altering the timing, location, or sequencing of the activity to reduce the likelihood or consequence of the risk. One main option was considered and subsequently adopted:

If the survey occurs in September, October, November, or December, the acquisition lines will be acquired working from the deepest lines first

This option is likely to minimise the disturbance to sensitive ecosystems, particularly during breeding or migration periods of marine species. By starting with the deepest lines, the risk of disturbing more sensitive coastal or shallow areas is reduced, such as the Southern Right Whale when in its coastal reproduction BIA. Similarly, acquiring the deepest lines first means the survey will be closer to the coast at the time the survey would overlap with the early arrival of Blue Whales.

9 Predicted Levels of Risks

Though vessel collisions with marine fauna occur within Australia they have not been reported during seismic surveys. The extent of the area where the risk of a vessel collision with marine fauna may occur is within the Operational Area and the risk could occur while the activity is underway. The worst potential outcome from vessel collision would be mortality or serious injury of an individual.

9.1 Change in Physical Condition

9.1.1 Turtles

No habitat critical to the survival of marine turtles or biologically important areas have been identified within the Operational Area, from the Recovery Plan for Marine Turtles in Australia (DoEE 2017) or PMST Report (Appendix B5). Thus, it is likely that the three marine turtle species identified in the PMST Report (Green, Leatherback and Loggerhead) may be present in low numbers within the Operational Area.

The Recovery Plan for Marine Turtles in Australia (DoEE 2017) details that impact from vessels can cause serious injury and/or death to individual marine turtles and is particularly an issue in shallow coastal foraging habitats and inter-nesting areas where there are high numbers of recreational and commercial craft, and in areas of marine development. Although the outcome can be fatal for individual turtles, boat strike (as a standalone threat) has not been shown to cause stock level declines.

The National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Megafauna (CoA 2017c) found speed to be a critical factor in determining a flee response in marine turtles being approached by vessels. The proportion of flee responses decreased significantly with increasing speed, particularly with close encounters. While speed is a particularly important factor, so too is the movement patterns of the vessel for example, whether a vessel is transiting a dedicated route or is a recreational boat that is moving erratically.

The predicted level of consequence to marine turtles from a vessel collision is assessed as major (injury or death of individuals of a protected species) with a likelihood of rare (almost impossible / unheard of in the industry) with a predicted level of risk of medium, based on:

- Though vessel collisions with marine fauna occur within Australia they have not been reported during seismic surveys.
- There is no habitat critical to the survival of marine turtles or BIAs within Operational Area.
- There are no shallow coastal marine turtle foraging habitats or inter-nesting areas within the Operational Area.
- The seismic and support vessels will operate at a speed of no more than 6 knots during acquisition (Activity Limitation).
- The seismic survey is undertaken by following a set racetrack pattern (see the Description of Activity in Appendix A2) and not moving erratically.
- Marine fauna observers will be on the seismic vessel watching for fauna (Fauna Management System).
- If an incident occurred, it would be restricted to individual marine turtles and will not affect turtle species at a population level

9.1.2 Cetaceans

Twenty-three whale/dolphin species (or species habitat) may occur within the Operational Area. Foraging behaviours were identified for the Blue, Fin, Pygmy Right and Sei Whale and breeding for the Southern Right Whale. The Operational Area overlaps Southern Right Whale migration BIA and

the Pygmy Blue Whale foraging (annual high use area) BIA. Other whale/dolphin species identified are transient within the Operational Area.

The Conservation Management Plan for the Blue Whale (DoE 2015c) details that collisions will impede recovery of blue whale populations if enough individuals in the population lose reproductive fitness or are killed. Although all forms of vessels can collide with whales, severe or lethal injuries are more likely to occur by larger or faster vessels. Blue Whales in the Bonney Upwelling region regularly feed at the surface on krill aggregations and are likely to be more vulnerable to ship strike.

The Conservation Management Plan for the Blue Whale (DoE 2015c) assesses the threat of vessel collision to Antarctic and Pygmy Blue Whales as having a moderate consequence (population recovery stalls or reduces) with a possible likelihood (might occur at some time) giving an overall rating of high. Relevant actions from the recovery plan are ensure the risk of vessel strikes on blue whales is considered when assessing actions that increase vessel traffic in areas where blue whales occur and, if required, appropriate mitigation measures are implemented.

The National Recovery Plan for the Southern Right Whale (DCCEEW 2024) details that in Australia, Southern Right Whales are the second most common species involved in Australian vessel strikes, which is consistent with worldwide data. At present, there have been ten vessel strike reports of Southern Right Whales in Australian waters between 1997 and 2015, with at least four mortalities including mother-calf pairs in the region of the eastern population.

The Conservation Management Plan for the Southern Right Whale (DCCEEW 2022) assesses the threat of vessel collision as having a major consequence (population declines) with an almost certain likelihood (expected to occur every year) giving an overall rating of very high. Relevant actions from the recovery plan are ensure environmental impact assessments and associated plans consider and quantify the risk of vessel strike and associated potential cumulative risks in BIAs.

The National Recovery Plan for the Southern Right Whale (DCCEEW 2024) details that proven effective mitigation measures for addressing vessel strike are to reduce co-occurrence of vessels with whales through separation of vessels from areas with high concentrations of whales and to reduce vessel speeds. Mitigation actions to prevent injury and minimise disturbance from vessels to Southern Right Whales include seasonal or temporary area restrictions/exclusions and speed restrictions in biologically important areas and habitat critical for survival.

The Conservation Advice for the Sei Whale (TSSC 2015c) and Fin Whale (TSSC 2015b) lists vessel strike as a threat with a minor consequence rating.

The National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Megafauna (CoA 2017c) details that speed is a concern when considering collision risk and the outcome. Vanderlaan and Taggart (2007) observed that an escalation in speed of the vessel caused an increase in the severity of injury to large cetaceans. Slower moving vessels provide greater opportunity for both fauna and vessel to avoid collision.

Large, high-speed vessels have become a major concern as they can travel at speeds of up to 35 to 40 knots, which correlates to an increase in collisions (Weinrich 2004, Ritter 2010). According to Laist et al. (2001), 89 per cent of incidences where the whale was severely hurt or killed occurred at vessel travelling speeds greater than 14 knots and were most serious in large vessels (> 80 m). Furthermore, the chance of an injury being lethal increases significantly as vessel speed increases up to 13-15 knots (Vanderlaan and Taggart 2007).

The predicted level of consequence to cetaceans from a vessel collision is assessed as major (injury or death of individuals of a protected species) with a likelihood of rare (almost impossible / unheard of in the industry) with a predicted level of risk of medium, based on:

- Though vessel collisions with marine fauna occur within Australia they have not been reported during seismic surveys.
- The seismic and support vessels will operate at low speed of no more than 6 knots during acquisition (Activity Limitation).

- Separation distances will be applied to cetaceans as per the EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans (Fauna Management System)
- Marine fauna observers will be on the seismic vessel watching for fauna (Fauna Management System).
- If an incident occurred, it would be restricted to individual whales or dolphins and will not affect the species at a population level.

9.2 Measures Adopted to Manage Environmental Risks

The following measures have been adopted to ensure that the risks associated with potential collisions with marine fauna from the survey and support vessels will be of an acceptable level.

These measures have been taken through to the ALARP assessment in the next stage of the CGG assessment process. This assessment can be found in Appendix F2.

Table D2-2 - Measures adopted to manage collisions with marine fauna.

Measure	Measure Type	Details and Justification
Streamer Design Modification or Turtle Guards	Item of Equipment	Streamer tail buoys will be of a design that does not represent an entrapment risk to turtles or in the case of older models then turtle guards will be used.
Fauna Management Plan	Resource	The Fauna Management System (Appendix G2) provides details about how the Regia MSS will be carried out in a way the environmental impacts from collisions to marine fauna will be compliant with EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with Cetaceans. The requirements of the EPBC Regulations set out measures to reduce vessel speed to decrease probability of contact with approaching cetaceans.
Operational Procedures	Procedure	Implementation of EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with Cetaceans to reduce the risk of collision with marine fauna during the activity. This procedure always applies to all vessels.

10 Demonstration Risks Will Be of An Acceptable Level

10.1 Discussion on Principles of ESD

Temporary, Reversible, Small Scale and Natural variation

The petroleum activity incorporates measures such as real-time monitoring, vessel strike avoidance protocols, and mitigation strategies to prevent collisions with marine fauna, including turtles and Blue Whales. These strategies ensure that any risk of collision is minimized and that any potential impacts are temporary, reversible, and small-scale in nature. This approach is aligned with the principles of Ecologically Sustainable Development (ESD), where the environmental damage is minimal, and any harm caused is temporary and recoverable.

Based on sufficient information

The risk assessment is based on comprehensive data, including scientific literature, species distribution information, and relevant management plans under the EPBC Act. The use of real-time monitoring and avoidance protocols ensures that risks to marine fauna are well understood and effectively managed. The precautionary principle is applied in cases where uncertainty exists regarding the potential risks, further ensuring that impacts on marine fauna are minimised.

Activity not inconsistent with EPBC Act

The environmental management strategies for the activity align with the management plans and recovery plans outlined in the EPBC Act. By adhering to these guidelines and incorporating species-specific mitigation strategies, the activity ensures that it is consistent with the EPBC Act's requirements for protecting marine fauna, particularly for vulnerable species such as turtles and Blue Whales.

10.2 Biological and Ecological Categories

The risk of collisions with marine fauna, including turtles and Blue Whales, is mitigated by implementing vessel strike avoidance protocols, real-time monitoring, and other industry-standard measures. These efforts ensure that any biological impacts are temporary, reversible, and of low intensity. The activity is not expected to result in significant harm to population levels, and marine fauna are expected to continue functioning in their ecosystems without disruption. The measures in place also reduce the risk of any lasting ecological damage, ensuring that the health, diversity, and functioning of the ecosystem remain intact.

10.3 Discussion on Economic, Cultural and Social Categories

Collisions with marine fauna could impact industries such as fishing, tourism, and marine-based recreation, especially those that rely on the presence of species like turtles and Blue Whales. However, the preventive measures in place, including vessel strike avoidance and mitigation protocols, ensure that these industries are protected from significant operational or financial consequences. Additionally, the activity poses no long-term disruption to cultural practices or communities that rely on marine fauna. The activity maintains the viability of social, cultural, and economic activities by minimizing potential harm to species with social, economic, or cultural value.

10.4 Discussion on Consistency with Company Processes

CGG's approach to managing the risks of collisions with marine fauna is consistent with its internal environmental risk framework. The company's global operational history, particularly in managing seismic sound effects on the marine environment, supports the reliability of its risk management

processes. The use of CGG's impact and risk matrix ensures that environmental impacts are conservatively assessed, and mitigation measures are implemented effectively to avoid unacceptable outcomes. The company's established processes have consistently resulted in successful environmental outcomes, demonstrating the effectiveness and reliability of its approach to managing risks associated with marine fauna collisions.

This risk assessment has demonstrated that collision between marine fauna and the survey vessels has a:

- **Predicted level of consequence of major (4).**
- **Likelihood of occurrence as rare (1).**
- **Predicted level of risk of medium (5).**

11 Environmental Performance Outcomes

Defined Acceptable Level (From Section 6)	Environmental Performance Outcome	Rationale
Prevent collisions with marine fauna.	No death or injury to fauna, including listed threatened or migratory species, from the activity.	The implementation of vessel speed restrictions, real-time marine fauna observations, and avoidance protocols ensures the activity does not result in collisions, entrapment, or injury to marine species, including listed threatened or migratory fauna such as turtles and Blue Whales.
Prevent entrapment of turtles.		
Prevent collisions with Blue Whales.		
Industries, livelihoods, and ecosystem services remain viable, with no sustained financial or operational consequences resulting from changes in species behaviour, abundance, or access to resources.	Social, cultural, and economic features are protected, sustaining their value for people and communities.	The prevention of harmful interactions with marine fauna ensures that the ecological balance and species populations remain stable, which in turn supports the continuity of marine-based industries, community practices, and cultural relationships tied to the marine environment.
Culturally important species, places, and practices can continue without disruption to their role, accessibility, or long-term viability.		
People and communities can continue engaging with the natural environment, recreational activities, and heritage values without experiencing long-term or irreversible disruption.		

12 Recommendations

The predicted level of risk is medium and below pre-defined acceptable levels. The mitigation and management measures in place provide a reliable prevention mechanism to ensure confidence in the predicted likelihood levels, thus there are no further recommendations.

13 Document Control

Date	Revision	Update
6 July 2023	A	Draft prepared for initial comment
23 August 2023	B	Update based on comments and relevant person feedback
11 Sept 2023	0	Approved for release on Regia MSS website
20 Dec 2023	1	EP submission to NOPSEMA
14 May 2024	2	Updated following public comment, update to PMST searches, and updated literature.
21 October 2024	3	Updated following NOPSEMA assessment
16 April 2025	4	Updated following NOPSEMA OMR 1 Letter
5 December	5	Updated following NOPSEMA OMR 2 Letter

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Annex 1

Public Comment

The following consultation feedback was received since the beginning of the public comment period starting 25 January 2024. Table D2-3 shows how this feedback has been incorporated into the environmental assessments.

Table D2-3 - Public comment input

Matter	Matter ID	Changes made arising from public comment
Matter: Flawed argument regarding animals moving away	I04	CGG has considered these claims and has updated the EP Appendices E2 -E7, F1 and F3 to clarify that, while some displacement is expected from mobile taxa during the Regia MSS, the survey will not preclude animals from the Operational Area in its entirety. Instead, animals are expected to temporarily move away from the active acoustic source, but once the source passes, animals will be free to move back into the habitat that they departed from.
Matter: Effectiveness of mitigation measures	E08	EP Appendices D2 and E5 have been updated to include existing mitigation and management measures that will reduce the likelihood of injury associated with vessel collision and underwater sound including implementing the EPBC Act Policy Statement 2.1 - Interaction between offshore seismic activities and whales (Soft-start Procedure), which provides for marine turtles to move away from the activity before the airguns reach full power.
Matter: Geographic range and all species need to be defined and considered	I16	CGG has considered these claims and has rerun the PMST reports to ensure that all information on the likely/known presence of relevant species within the area, as well as information on their protection status, Biologically Important Areas (BIAs) and behaviours is up to date. The updated PMST reports are provided in full in EP Appendix B5.
Matter: Lack of detail on EPBC-listed species and enforceable measures	I17	CGG has considered these claims and has rerun the PMST reports to ensure that all information on the likely/known presence of relevant species within the area, as well as information on their protection status, Biologically Important Areas (BIAs) and behaviours is up to date. The updated PMST reports are provided in full in EP Appendix B5.

Annex 2

Objections and Claims Raised from Consultation

During the consultation process relevant persons were invited to raise objections and claims about the adverse effects of the activity. An assessment of merit of each objection or claim has been made by CGG which can be found in the consultation report using the Feedback ID number shown in Table D2-4. If an objection or claim had merit and was relevant to this assessment it has been included in the table below.

Table D2-4 – Objections and Claims raised from consultation.

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
4069	Concerned about the harm being inflicted on oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1673
4356	Concerns about the harm and damage to the marine ecosystem.	Titleholder has undertaken a thorough analysis and assessment of all relevant literature to inform its decisions. The MSS will not impact the marine environment within the area of operation. Mitigation plans are in place to reduce any impacts to as low as practicable.	2831
4075	Concerns about marine life and ecosystems.	The effects of underwater sound have been extensively assessed based on the latest scientific literature. CGG has committed to a variety of protective measures for various marine fauna (see G1)	2117
4085	Concerns of damage to the marine environment by seismic blasting and gas extraction	All available scientific evidence is used to inform the environmental assessment on seismic impacts. There are no impacts identified that will affect the population stability of any taxa.	825
4128	Lack of adequate monitoring of species present or likely to be impacted.	Title holder has undertaken a thorough analysis and assessment of all relevant literature to inform its decisions regarding species that may be affected by the Regia MSS. 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.	3237

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
4130	Lasting and unrecoverable damage mentioned.	The titleholder acknowledged the feedback, noting that risks and impacts are assessed in the Environmental Plan (EP) and can be found in D1 to D4 and E1 to E9, and F3. Measures to minimise adverse impacts on marine life are outlined in the EP in G1.	4808
4154	Questions a previous statement that indicated there would be no mortal effects from seismic activities.	The titleholder acknowledged the feedback, noting that impacts and risks to the marine environment are assessed in the Environmental Plan (EP) and can be found in D1 to D4 and E1 to E9, and F3. Measures to minimise adverse impacts on the marine environment are outlined in the EP in G1.	2088
4158	Reference to the destruction and degradation of the marine environment observed during diving trips.	The titleholder acknowledged the feedback, noting that impacts and risks to the marine environment are assessed in the Environmental Plan (EP) and can be found in D1 to D4 and E1 to E9, and F3. Measures to minimise adverse impacts on the marine environment are outlined in the EP in G1.	2830
4166	Risk to the marine environment with the plan.	Titleholder has conducted a series of thorough risk assessments including the following aspects: Accidental release of waste (D1), Fauna Interactions (D2), Invasive Marine Species (D3) and Accidental release of fuel (D4), wherein which relevant receptors have been assessed.	2677
4175	Seismic blasting is harmful and disruptive to marine life of many species.	The titleholder acknowledged the feedback, noting that impacts and risks to marine life are assessed in the Environmental Plan (EP) and can be found in D1 to D4 and E1 to E9, and F3. Measures to minimise adverse impacts on marine life are outlined in the EP in G1.	3343
4176	Seismic blasting negatively affects not only whales but also crucial marine life, including fish, crustaceans, and zooplankton, all of which play vital roles in the marine ecosystem.	The titleholder acknowledged the feedback, noting that impacts and risks to marine life are assessed in the Environmental Plan (EP) and can be found in D1 to D4 and E1 to E9, and F3. Measures to minimise adverse impacts on marine life are outlined in the EP in G1.	2074
4177	Seismic blasting would have a significant negative effect on marine creatures and ecosystems.	The titleholder acknowledged the feedback, noting that impacts and risks to marine life are assessed in the Environmental Plan (EP) and can be found in D1 to D4 and E1 to E9, and F3. Measures to minimise adverse impacts on marine life are outlined in the EP in G1.	3343
4186	Stakeholder expressed concern about the destruction and	Petroleum activities do not operate to a no-impact standard. Instead, the Regia	2963

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
	depletion of the ocean due to the activity.	MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	
4187	Stakeholder expressed concern about the potentially devastating impact of seismic testing on ocean marine life.	The titleholder acknowledged the feedback, noting that impacts and risks to marine life are assessed in the Environmental Plan (EP) and can be found in D1 to D4 and E1 to E9, and F3. Measures to minimise adverse impacts to marine life are outlined in the EP in G1.	3209
4189	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1653
4190	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1655
4191	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and	1659

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
		scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	
4192	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1661
4193	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1662
4194	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1663
4195	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work	1665

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
		below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	
4196	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1667
4197	Stakeholder noted concern for harm being inflicted on our oceans by unnecessary gas exploration.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1670
4211	Stakeholder stated they were extremely concerned about the risks, damage and destruction caused by exploration activities in the marine environment.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan.	1049

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
4253	The possible effects to marine life and ecosystems are my primary concern	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	2117
4259	The proposed works will harm and damage the climate and ocean life.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	2256
4265	The seismic process is going to affect local marine life, ecosystems, and the climate in the community.	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 also in place to reduce any impacts to defined acceptable levels and as low as reasonably practicable.	1259
4267	The Stakeholder also objected to the project on the basis that it would impact every marine creature and sea bird.	Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan. 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.	2064

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
4274	The stakeholder claims that seismic exploration poses a significant danger to marine life in general. This claim suggests a strong opposition to the practice due to its perceived harmful effects on the marine ecosystem as a whole.	The titleholder publicly responded to this interactive map comment explaining that legislative framework in Australia permits some impact from offshore petroleum if it is managed and of an acceptable level. We believe that responsible development of gas is essential for maintaining the current quality of life we all enjoy and ensuring we pass that quality of life on to future generations. Gas is part of the Labour governments energy transition plan.	2107
4276	The stakeholder does not accept the blasting activity as beneficial or more important than existing marine life and structures.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	2255
4288	The stakeholder objected to the project on the basis that it would impact the Stakeholder personally and every person in the community who love the ocean. Stakeholder noted that they do not support the activity and find it distressing to even think about the damage that could be caused for thousands of creatures and the future of herself, other people of Port Fairy and the greater community.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan.	2064
4301	The stakeholder stated that the proposed activity is environmentally unsound irrespective of the assessment process and predicted environmental risk.	Petroleum activities do not operate to a no-impact standard. Instead, the Regia MSS is required to define the acceptable levels of impact and risk, and work below those levels. Acceptable levels of impact are established based on relevant up-to-date technical and scientific studies, government advice, and are considerate of the information gathered through the consultation process. This information is used to make predictions of the levels of impact we expect to occur and compares those to the previously defined acceptable levels and is presented in the Environment Plan	1747

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
4315	The statement suggests that the significant harm caused by seismic activity to marine life and commercial fisheries, along with the existing natural gas supplies and climate change issues, renders the industrialisation of Port Fairy's coastline unacceptable. It emphasises community disapproval of allowing major oil companies to profit at the expense of the local environment and tourism.	We believe impacts from our activity can be managed to below acceptable levels. Further development of the offshore area would be subject to multiple future approvals. The visual impact from this survey would be temporary and similar to the shipping/fishing activity that already occurs in the region (Event ID 2076).	2076
4338	Concerned that whales in the southwest will no longer return to birth and nurture calves	Titleholder responded to the stakeholder, describing CGG's commitment to safeguarding marine mammals, the assessment process, regulations and measures currently in place. The stakeholder was provided with consultation information and invited to engage.	1255
4354	Uncertainty about the full extent of damage to the marine ecosystem.	Titleholder has undertaken a thorough analysis and assessment of all relevant literature to inform its decisions. The MSS will not impact the marine environment within the area of operation. Mitigation plans are in place to reduce any impacts to as low as practicable.	2831
4358	The stakeholder was concerned about the impacts on flora and fauna being damaged and killed away from the coastline.	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 flora or fauna within the area of operation. Mitigation plans are in place to reduce any impacts to as low as practicable.	2821
4362	Concerns about the lack of environmental reviews of seismic surveys at necessary scales to assess, mitigate and monitor impacts.	The titleholder has undertaken a thorough analysis and assessment of all relevant literature to inform its decisions. The titleholder responded providing links to large scale studies on seismic undertaken in Australian waters and offered to provide individual with impact assessments when they became available.	1389
4363	Stakeholder noted opposition to the harmful effects on marine life and the pristine coast.	The titleholder provided information on identifying potential impacts and risks and putting mitigations in place such as, conducting survey during time of year marine mammals are less likely to be in area, reducing sound source to lowest setting and reducing number of times activated, implementing marine mammal and fish monitoring programs, exclusion zones, following strict NOPSEMA guidelines. Provided link to PEIRA and document library on website.	786

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
4364	Concern about the future of ocean health for children and sea life, including whale children.	Titleholder responded in Event ID: 1416, describing CGG's commitment to safeguarding marine mammals, the assessment process, regulations and measures currently in place. The stakeholder was provided with consultation information and invited to engage.	1410
4200	Stakeholder noted that dolphins use clicks and whistles as a complex form of communication, with observations of bottlenose dolphins using distinctive whistles for individuals within their pod, similar to how humans use names. Claimed that blasts from seismic testing could cause temporary and permanent hearing loss in dolphins and whales, citing instance near Peru, where some 900 long-beaked common dolphins and black porpoises washed up dead along a stretch of beach, shown to have had fractures in their ear bones and signs of bleeding from their middle ears. - LINK provided.	"A Preliminary Environmental Impact and Risk Assessment is undertaken during an impact assessment process (our PEIRA is available here). The PEIRA is compiled to identify environmental values and sensitivities, to provide an evaluation of the environmental impacts and risks associated with the project. The PEIRA is then used to inform the environmental assessment documents, and as above, the environmental impact and risk treatments, which are being uploaded in the document library. The draft Environmental Impact Assessments are in the document library now, for review and feedback. For transparency we are uploading the entire documents, however if there is a concern you would like a summary or specific information on, please let us know. Further information on marine mammal treatments is covered below in response to concern 6."	2886
4487	Claims that CGG's proposed activities are inconsistent with the Recovery Plans made under the EPBC Act, the Southern Right Whale Recovery Plan and the Blue Whale Recovery Plan. GMTOAC states that these activities pose known physical and behavioural risks to the Eastern Population of Southern Right Whales and to Pygmy Blue Whales. These risks include impacts from anthropogenic underwater noise, particularly seismic noise, vessel strikes, climate-driven changes in prey availability, and the cumulative effects of these pressures, all of which have the potential to injure or kill individuals and affect populations. GMTOAC notes that under the EPBC Act Program and NOPSEMA's decision-making guidelines, an Environment Plan cannot be accepted if it is inconsistent with a recovery plan. It emphasises that both Recovery Plans contain "Very High" importance actions requiring that Blue Whales and Southern Right Whales must be able to continue	CGG maintains that its approach aligns with statutory obligations and industry best practice. It asserts that all regulatory requirements under Regulation 34 have been met, and that its environmental performance outcomes and control measures are grounded in the best available science and tailored to the ecological and cultural sensitivities revealed through consultation. The Regia MSS Environment Plan (EP) was designed to ensure impacts and risks are reduced to As Low As Reasonably Practicable (ALARP) and to an acceptable level. Regarding whale protection, CGG highlights that the EP includes specific mitigation measures for culturally and ecologically significant marine fauna, including species noted in relevant Recovery Plans. Early correspondence in February 2023 identified Southern Right Whales and Pygmy Blue Whales as key sensitivities, and the EP commits to spatial and temporal avoidance measures, sound-source shutdowns, and exclusion zones to protect them. These measures explicitly consider cultural significance, such as timing restrictions to avoid the Karntubul (Southern Right Whale) birthing period.	EVT352

Feedback ID	Objection or Claim Summary	Titleholder Response	Event ID
	using their Biologically Important Areas (BIAs) without auditory impairment, injury, or displacement. The plans also call for preventing disruption and displacement of Karntubul (Southern Right Whales) from BIAs due to anthropogenic noise such as seismic surveys.	The whales, Karntubul and Wuuloc, are identified in the EP as sensitive receptors with dedicated protective measures. CGG confirms that these cultural and ecological sensitivities were incorporated into the environmental assessment. The EP acknowledges the sacred cultural status of Koontapool (Southern Right Whale) and Wuuloc (Pygmy Blue Whale) for the Gunditjmara people and includes them in impact and cumulative risk assessments. Appendix F3 references the Nyamat Mirring Plan 2023–2033 and recognises Gunditjmara spiritual connections, including to Karntubul. CGG substantively addresses the relevant issues, including underwater noise, vessel interactions, and cumulative effects. The EP sets out noise-management frameworks, timing restrictions, and cumulative impact analyses consistent with the concerns raised.	
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	EVT352

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		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.	
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
4493	Claims that CGG's proposed seismic activities contribute both directly and indirectly to broader threats faced by Southern Right Whales, including industrialisation of the marine environment, climate change, and pollution or contamination from vessel discharges.	Broader threats such as climate change and industrialisation fall outside the scope of the Environment Plan, as outlined in the response to Statements 156–166. The EP assesses only the environmental risks directly associated with the proposed activity. These risks are evaluated in the D Appendices, which demonstrate that any residual risks have been reduced to an acceptable level.	EVT352
4495	GMTOAC claims CGG's assertion that vessel strikes are "rare" or "almost impossible," noting that the absence of recorded collisions involving seismic vessels does not demonstrate that such events have not occurred. They highlight that smaller support vessels, also part of CGG's activity, are far less	CGG disagrees that they have underestimated vessel-strike risk; the survey incorporates the highest practicable controls, including limiting vessel speed to 5 knots, commencing acquisition on deep lines during sensitive months, adhering to EPBC separation distances, and using both trained observers and autonomous PAM	EVT352

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	represented in AIS datasets, meaning collisions involving them are likely underreported. Citing recent research, GMTOAC notes that small vessels were responsible for 67% of humpback whale strikes in Moreton Bay and that the waters around Portland, where CGG intends to operate, have been identified by government agencies as a particular vessel-strike risk area for the critically endangered eastern population of Southern Right Whales. GMTOAC requests clarification on how CGG concluded that vessel-strike likelihood is minimal, arguing that for species with very low population numbers, such as the eastern Southern Right Whale, even a single mortality could have severe population-level consequences. They further argue that CGG has underestimated vessel-strike risk by excluding transiting vessels, used for mobilisation, demobilisation, port calls, crew changes, and maintenance, from its assessment. GMTOAC maintains that these vessel movements are an inherent part of the proposed activity and should have been assessed for their potential environmental impacts.	technologies proven to reduce strike risk. CGG maintains that these combined measures minimise spatial and temporal overlap with sensitive whale habitats and greatly improve detection capacity, resulting in a vessel-strike likelihood rated as rare. The company emphasises that its conclusion is based on operational design, low vessel speeds, continuous real-time monitoring, and mandatory separation measures, not merely on AIS data or a lack of past seismic-related strikes. CGG concludes that the overall suite of controls reduces vessel-strike risk to ALARP and provides a defensible basis for determining that the likelihood of a strike is minimal.	
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 15 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

Annex 3

EPBC Act Listed Species within the Operational Area Relevant to Collison

Common Name	Presence	Threatened Category	Migratory Status	Migratory Category	Marine Status	Biologically Important Area	Management Plan Conservation Advice Listing Advice
Turtles							
Green Turtle	Species or species habitat may occur within area	Vulnerable	Migratory	Migratory Marine Species	Listed	None identified	Recovery Plan for Marine Turtles (DoEE 2017)
Leatherback Turtle, Leathery Turtle	Species or species habitat likely to occur within area	Endangered	Migratory	Migratory Marine Species	Listed	None identified	Recovery Plan for Marine Turtles (DoEE 2017) Approved Conservation Advice for *Dermochelys coriacea* (Leatherback Turtle*)* (DEWHA 2008)
Loggerhead Turtle	Species or species habitat likely to occur within area	Endangered	Migratory	Migratory Marine Species	Listed	None identified	Recovery Plan for Marine Turtles (DoEE 2017)
Dolphins							
Bottlenose Dolphin	Species or species habitat may occur within area					None identified	None identified
Common Dolphin, Short-beaked Common Dolphin	Species or species habitat may occur within area					None identified	None identified

Common Name	Presence	Threatened Category	Migratory Status	Migratory Category	Marine Status	Biologically Important Area	Management Plan Conservation Advice Listing Advice
Dusky Dolphin	Species or species habitat likely to occur within area		Migratory	Migratory Marine Species		None identified	None identified
Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin	Species or species habitat likely to occur within area					None identified	None identified
Risso's Dolphin, Grampus	Species or species habitat may occur within area					None identified	None identified
Southern Right Whale Dolphin	Species or species habitat may occur within area					None identified	None identified
Whales							
Andrew's Beaked Whale	Species or species habitat may occur within area					None identified	None identified
Antarctic Minke Whale, Dark-shoulder Minke Whale	Species or species habitat likely to occur within area		Migratory	Migratory Marine Species		None identified	None identified

Common Name	Presence	Threatened Category	Migratory Status	Migratory Category	Marine Status	Biologically Important Area	Management Plan Conservation Advice Listing Advice
Arnoux's Beaked Whale	Species or species habitat may occur within area					None identified	None identified
Blainville's Beaked Whale, Dense-beaked Whale	Species or species habitat may occur within area					None identified	None identified
Blue Whale	Foraging, feeding or related behaviour known to occur within area	Endangered	Migratory	Migratory Marine Species		Foraging (annual high use area)	Conservation Management Plan for the Blue Whale (DoE 2015c)
Cuvier's Beaked Whale, Goose-beaked Whale	Species or species habitat may occur within area					None identified	None identified
Dwarf Sperm Whale	Species or species habitat may occur within area					None identified	None identified
False Killer Whale	Species or species habitat likely to occur within area					None identified	None identified
Fin Whale	Foraging, feeding or related behaviour known to occur within area	Vulnerable	Migratory	Migratory Marine Species		None identified	Conservation Advice *Balaenoptera physalus* Fin Whale (TSSC 2015b)

Common Name	Presence	Threatened Category	Migratory Status	Migratory Category	Marine Status	Biologically Important Area	Management Plan Conservation Advice Listing Advice
Gray's Beaked Whale, Scamperdown Whale	Species or species habitat may occur within area					None identified	None identified
Hector's Beaked Whale	Species or species habitat may occur within area					None identified	None identified
Humpback Whale	Species or species habitat likely to occur within area		Migratory	Migratory Marine Species		None identified	Listing Advice *Megaptera novaeangliae* Humpback Whale (DAWE 2022a)
Killer Whale, Orca	Species or species habitat likely to occur within area		Migratory	Migratory Marine Species		None identified	None identified
Long-finned Pilot Whale	Species or species habitat may occur within area					None identified	None identified
Minke Whale	Species or species habitat may occur within area					None identified	None identified
Pygmy Right Whale	Foraging, feeding or related behaviour likely to occur within area		Migratory	Migratory Marine Species		None identified	None identified

Common Name	Presence	Threatened Category	Migratory Status	Migratory Category	Marine Status	Biologically Important Area	Management Plan Conservation Advice Listing Advice
Pygmy Sperm Whale	Species or species habitat may occur within area					None identified	None identified
Sei Whale	Foraging, feeding or related behaviour known to occur within area	Vulnerable	Migratory	Migratory Marine Species		None identified	Conservation Advice *Balaenoptera borealis* sei whale (TSSC 2015c)
Short-finned Pilot Whale	Species or species habitat may occur within area					None identified	None identified
Southern Right Whale	Breeding known to occur within area	Endangered	Migratory (as Balaena glacialis australis)	Migratory Marine Species		Migration	Conservation Management Plan for the Southern Right Whale (CoA 2012) National Recovery Plan for the Southern Right Whale (DCCEEW 2024)
Sperm Whale	Species or species habitat may occur within area		Migratory	Migratory Marine Species		None identified	None identified
Strap-toothed Beaked Whale, Strap-toothed Whale, Layard's Beaked Whale	Species or species habitat may occur within area					None identified	None identified

Common Name	Presence	Threatened Category	Migratory Status	Migratory Category	Marine Status	Biologically Important Area	Management Plan Conservation Advice Listing Advice
True's Beaked Whale	Species or species habitat may occur within area					None identified	None identified