Submission to the Victorian Environment Effects Statement (EES) Inquiry and Commonwealth Environmental Impact Statement (EIS) Star of the South Offshore Wind Project:

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Date: 29 June 2026

1. Introduction

1.1 Purpose of this Submission

I submit this response to the Victorian Environment Effects Statement (EES) Inquiry and the Commonwealth Environmental Impact Statement (EIS) for the proposed Star of the South Offshore Wind Project.

This submission has been prepared following an extensive review of the exhibited EES, Commonwealth EIS, specialist technical reports, publicly available project information and correspondence provided by Star of the South.

In preparing this submission, I reviewed a substantial volume of exhibited documentation, including the Victorian EES, Commonwealth EIS and numerous specialist technical reports comprising thousands of pages of material.

Given the volume and technical complexity of the exhibited documentation, I found the consultation timeframe challenging. For many members of the community, carefully reviewing and understanding such an extensive body of technical information within the exhibition period would have required a significant commitment of time and resources.

While I have made every effort to review the material thoroughly, it is possible that additional matters may emerge from further examination of the exhibited documents. I respectfully request that this context be taken into account when considering my submission.

The purpose of this submission is not to repeat those assessments. Rather, it is to identify areas where, after reviewing the available evidence, I consider important uncertainties remain regarding the potential environmental, social and economic impacts of the proposal.

1.2 Project Overview

The Star of the South proposal is one of the most advanced offshore wind developments currently proposed in Australia.

The project extends beyond the construction of offshore wind turbines and includes offshore foundations, inter-array cables, export cables, offshore substations, cable landfall, onshore

substations, transmission infrastructure, construction compounds, vessel and helicopter operations, maintenance activities extending over several decades and eventual decommissioning.

As such, the environmental assessment should consider the complete life cycle of the project, including construction, operation, maintenance and end-of-life rehabilitation.

1.3 Scope of this Submission

This submission focuses on the matters that, in my view, warrant particular consideration by the Inquiry.

These include:

- Cumulative impacts;
- Protected birds and migratory species;
- Underwater noise and marine mammals;
- Commercial fishing;
- Tourism and regional businesses;
- Visual amenity;
- Onshore infrastructure;
- Economic considerations;
- Operational risks;
- Decommissioning and long-term environmental responsibility.

Where possible, this submission refers directly to the exhibited EES, Commonwealth EIS, specialist technical reports and other authoritative sources. It also identifies areas where additional clarification or evidence would assist in understanding the likely impacts of the proposal.

1.4 Overall Position

Having reviewed the exhibited documentation, I acknowledge the significant work undertaken to identify potential impacts and develop mitigation measures.

However, I remain concerned that important uncertainties persist regarding several aspects of the proposal, particularly where conclusions rely on predictive modelling, future management plans or adaptive management over the project's operational life.

Given the scale of the proposal and the environmental significance of the Gippsland coast, I submit that these matters warrant careful consideration before approval decisions are made.

2. Assessment of Cumulative Impacts

2.1 Key Finding

The exhibited documents provide detailed assessments of individual environmental, social and economic impacts. However, I remain concerned that the combined effects of the project over its full life cycle, and within the broader context of proposed offshore wind development across Gippsland, have not been fully demonstrated.

2.2 Introduction

Cumulative impact assessment is one of the most important aspects of environmental assessment for projects of this scale.

While individual impacts may be assessed as manageable in isolation, the overall environmental effect of a project is determined by how those impacts interact over time and across the broader landscape.

The Star of the South proposal is not a single activity. It comprises offshore turbines, foundations, inter-array cables, export cables, offshore substations, cable landfall, onshore substations, transmission infrastructure, construction compounds, vessel movements, helicopter operations, routine maintenance over several decades and eventual decommissioning.

These activities occur over different stages of the project's life and have the potential to affect the marine and coastal environment in different ways.

2.3 Life-Cycle Assessment

In my view, the environmental assessment should consider the project as a complete system rather than as separate construction and operational activities.

The proposal introduces a long-term industrial presence into the Gippsland marine environment. Construction, operation, maintenance and . decommissioning all have the potential to contribute to cumulative environmental, social and economic impacts.

While each stage is addressed within the documents, the interaction between these stages over several decades is inherently more difficult to predict.

2.4 Regional Context

The Star of the South project is one of several offshore wind proposals within the Gippsland Offshore Wind Zone.

Many of the environmental values considered within the documents, including migratory birds, marine mammals, commercial fisheries and tourism, extend well beyond the boundaries of an individual project.

For this reason, I remain concerned that the cumulative implications of multiple offshore wind developments, associated transmission infrastructure and prolonged industrial activity across the Gippsland region require careful consideration.

2.5 My Assessment

The EES/EIS contains extensive technical investigations supported by specialist studies and proposes numerous mitigation measures intended to reduce environmental impacts.

However, many conclusions rely upon predictive modelling, adaptive management, future monitoring programs and assumptions regarding the effectiveness of proposed mitigation measures.

While these are recognised components of environmental assessment, they also indicate that uncertainty remains regarding long-term environmental outcomes.

This is particularly relevant where internationally protected species, productive marine ecosystems and established regional industries may be affected over many decades.

The proponent's own EES Summary Report and specialist technical assessments identify a broad range of potential impact pathways associated with the project, including underwater noise, artificial lighting, vessel activity, oil spill risk, electromagnetic fields, seabed disturbance, habitat displacement, barrier effects and bird collision risk. The Summary Report also recognises the environmental significance of the project area, including protected marine mammals, threatened and migratory bird species, Ramsar wetlands, productive commercial fisheries, tourism values and coastal communities.

While the Summary Report frequently concludes that individual residual impacts are "negligible", "minor", "low" or "very low", these conclusions are generally based on individual impact assessments, predictive modelling and proposed mitigation measures. I remain concerned that the EES has not demonstrated with sufficient certainty how the combined effects of multiple impact pathways acting together over the full life cycle of the project, including construction, operation, maintenance and eventual decommissioning have been assessed.

Given the scale, duration and complexity of the proposal, I respectfully submit that additional consideration should be given to the cumulative interaction of these impacts, particularly where uncertainty remains regarding nationally protected species, productive marine ecosystems and existing regional industries.

Chapter Finding
I submit that additional consideration should be given to the cumulative interaction of project activities over the full life cycle of the proposal and within the broader context of offshore wind development proposed across Gippsland . .

The following chapters examine these matters in greater detail.

3. Chapter 3 – Birds, Migratory Species and Collision Risk

3.1 Key Finding

Studies have not demonstrated with sufficient certainty that impacts on protected, threatened and migratory bird species can be reduced to an acceptable level over the life of the project.

While the assessment proposes mitigation measures and ongoing monitoring, significant uncertainty remains regarding collision mortality, habitat displacement, barrier effects and the cumulative impacts of multiple offshore wind developments proposed across Gippsland.

3.2 Ecological Significance of the Project Area

The Gippsland coast forms part of an internationally significant marine environment supporting a diverse range of resident, migratory and threatened bird species. Star of The South identifies hundreds of bird taxa within the broader study area, including seabirds, shorebirds, raptors and migratory species protected under Australian legislation and international agreements, including JAMBA, CAMBA, ROKAMBA and the Convention on Migratory Species.

The studies identify a diverse assemblage of resident, migratory and threatened bird species within the project area and surrounding Gippsland marine environment. Species identified within the assessment, together with other species known to utilise the broader Gippsland coast and Bass Strait, include, among others::

- Shy Albatross (Endangered)
- Wandering Albatross
- Southern Royal Albatross
- Black-browed Albatross
- Short-tailed Shearwater
- Fluttering Shearwater
- Australasian Gannet
- Greater Crested Tern
- Fairy Tern
- Hooded Plover
- White-bellied Sea Eagle
- Eastern Osprey

- Numerous migratory shorebirds protected under international agreements.

Many of these species rely on Bass Strait for feeding, migration, breeding and resting. Given the ecological importance of the region, even relatively small increases in mortality or disturbance may have significant consequences for some protected populations***.***

The proponent's own Offshore Ornithology assessment identifies numerous threatened, migratory and marine bird species that utilise the project area and surrounding waters, including albatrosses, shearwaters, petrels, terns and other EPBC-listed species. The assessment also identifies biologically important areas and important foraging habitats that overlap or are adjacent to the proposed development. Given the acknowledged ecological significance of this region, together with the uncertainty surrounding long-term collision risk, displacement, barrier effects and cumulative impacts over the life of the project, I do not believe it has been demonstrated with sufficient certainty that impacts to these protected species can be reduced to an acceptable level.

3.3 Collision Risk and Behavioural Impacts

The proponent identifies several potential impacts on birds associated with the project, including direct collision with turbine blades, habitat displacement, barrier effects, attraction to infrastructure and behavioural disturbance.

Unlike many other project impacts, collisions represent direct mortality. The assessment relies heavily on predictive modelling based on assumptions regarding bird abundance, flight heights, avoidance behaviour, weather conditions and movement patterns. While predictive modelling is an important assessment tool, it cannot predict with certainty how protected bird species will interact with one of Australia's first large-scale offshore wind developments over several decades.

The EIS also acknowledges that behavioural responses such as habitat displacement, barrier effects and attraction to artificial lighting and offshore infrastructure may affect different species in different ways. These behavioural impacts have the potential to alter movement patterns, foraging behaviour and habitat use, particularly for migratory and threatened species that rely on the Gippsland coast and Bass Strait throughout different stages of their life cycle.

Given the ecological significance of the region and the number of protected species identified within the assessment, I remain concerned that uncertainty persists regarding both direct collision mortality and broader behavioural impacts over the operational life of the project.

3.4 Collision Risk Modelling

Star of the South states that increasing the distance between the lowest turbine blade tip and the sea surface from 25 metres to 35 metres may reduce predicted collision risk by approximately ***40% for some bird species.***

During my review of the project, I sought clarification directly from Star of the South regarding this figure and how it should be interpreted. The responses confirmed that increasing the turbine air gap is predicted to reduce collision risk but does not eliminate bird mortality. Birds are still expected to collide with turbines after mitigation measures have been applied, and the degree of reduction varies between species.

The EIS includes species specific collision risk modelling and residual risk assessments for numerous seabird species. While the assessment concludes that many residual impacts are expected to be low or minor following mitigation, the modelling continues to predict bird collisions during the operational life of the project. Importantly, the assessment identifies a Medium residual collision risk for the Endangered Shy Albatross, even after mitigation measures have been applied.

My concern is that presenting a percentage reduction in collision risk does not explain the real-world significance of the remaining impacts. A statement that collision risk may be ***reduced by approximately 40% does not*** answer the fundamental question facing decision-makers:

How many protected and migratory birds are still expected to be killed over the life of the project, and why is that level of mortality considered acceptable?

While the EIS Summary Report and Technical Report E frequently describe residual impacts as "low", "minor" or "negligible", these conclusions rely on predictive modelling, assumptions regarding bird behaviour and avoidance rates, and the effectiveness of proposed mitigation measures. For species protected under Australian legislation and international agreements, I respectfully submit that the significance of the remaining predicted mortality is more important than the percentage reduction itself. Where uncertainty remains regarding impacts on threatened and migratory species, the precautionary principle should be given careful consideration.

3.5 Monitoring and Adaptive Management

Assessments propose post construction monitoring and adaptive management to assess actual bird interactions with the wind farm once operational.

However, monitoring cannot prevent bird mortality that has already occurred. It can only identify impacts after they have happened.

The proponent also advised that operational turbine shutdowns during periods of high bird activity are not currently proposed, stating that the predicted impacts do not warrant shutdowns and that suitable offshore technology is not currently available.

In my view, this places considerable reliance on future monitoring and adaptive management rather than demonstrating before approval that unacceptable impacts on protected bird species are unlikely to occur***.***

3.6 Protected Species and Australia's International Obligations

Many of the bird species identified within the assessment are protected under the Environment Protection and Biodiversity Conservation Act 1999 and international agreements including JAMBA, CAMBA, ROKAMBA and the Convention on Migratory Species.

These protections recognise the importance of conserving species whose populations extend beyond Australia's borders and reinforce the need for a precautionary approach where uncertainty remains.

3.7 Cumulative Impacts

The Star of the South project is only one of several offshore wind developments proposed within the Gippsland Offshore Wind Zone.

Migratory birds do not recognise project boundaries. Throughout their seasonal movements they may encounter multiple offshore wind farms, resulting in repeated exposure to collision risk, habitat displacement and barrier effects.

While each project has largely assessed its impacts individually, I remain concerned that the cumulative effects of multiple offshore wind developments on protected bird populations have not been fully demonstrated.

Chapter Finding

The Gippsland coast supports a diverse assemblage of resident, migratory, threatened and internationally protected bird species that rely on Bass Strait for feeding, migration, breeding and other essential life-history functions.

Throughout my review of the EES/EIS and study documents, I remain concerned that the assessment relies heavily on predictive modelling, assumptions regarding bird behaviour, proposed mitigation measures and post-construction monitoring to conclude that impacts will be acceptable.

Star Of The South acknowledges that bird collisions are still predicted after mitigation measures have been applied. It also identifies ongoing risks associated with habitat displacement, barrier effects and cumulative impacts. While the project refers to an **approximate 40% reduction in collision risk** through an increased turbine air gap, this figure alone does not demonstrate that the remaining level of mortality is acceptable for protected and threatened species over the life of the project.

Ultimately, the question is not whether collision risk can be reduced, but whether the remaining impacts on species protected under Australian legislation and international agreements are acceptable. I do not believe the EES provides sufficient certainty to answer that question.

Given the ecological significance of the Gippsland coast, the presence of nationally threatened and internationally protected species, and the cumulative scale of offshore wind development proposed for Bass Strait, I do not consider it has been demonstrated that residual impacts on bird populations have been reduced to an acceptable level.

Where uncertainty remains regarding direct mortality of protected species and the long-term consequences for biodiversity, the precautionary principle should be applied before irreversible decisions are made.

For these reasons, I do not consider the available evidence demonstrates, on the balance of probabilities,that the residual impacts have been reduced to an acceptable level.

4. – Underwater Noise and Marine Ecosystem

4.1 Key Finding

Pile driving is one of the most significant construction activities associated with the Star of the South project. While Star Of The South proposes mitigation measures to reduce underwater noise, I remain concerned that uncertainty persists regarding the potential impacts on the broader marine ecosystem, including species that form the foundation of the marine food web through to protected marine mammals.

4.2 Underwater Noise

The installation of turbine foundations will require pile driving, generating intense underwater noise during the construction phase.

The documents identify underwater noise as a key environmental impact and proposes mitigation measures including marine fauna observers, exclusion zones, soft start piling procedures and adaptive management.

In correspondence provided during my review of the project, Star of the South also advised that the use of bubble curtains may reduce underwater noise by approximately ***10–20 dB under certain conditions.***

While this information is useful, it also demonstrates that the effectiveness of the proposed mitigation depends on environmental and operational conditions. I remain concerned that the expected underwater noise levels before and after mitigation, and the resulting residual impacts,

have not been clearly explained given that underwater sound can travel considerable distances, particularly in the marine environment.

The proponent's own material identifies underwater noise as a key potential impact pathway and notes that acoustic monitoring detected vocalisations from several whale species, including Humpback Whale, Dwarf Minke Whale, Antarctic Minke Whale, Australian Pygmy Blue Whale and New Zealand Pygmy Blue Whale.

Although the assessment concludes that mitigation measures will reduce residual impacts, these conclusions rely on modelling, exclusion zones, soft-start procedures, monitoring and assumptions about animal movement and avoidance. I remain concerned that the broader ecological consequences of repeated underwater noise exposure, particularly during construction, have not been demonstrated with sufficient certainty.

4.3 The Marine Food Web

The Gippsland marine environment supports a complex and interconnected ecosystem.

At the base of this ecosystem are plankton and other microscopic organisms that underpin marine productivity. These support crustaceans, molluscs and other invertebrates, which in turn provide food for fish. Fish support seabirds, dolphins, seals and whales, creating an interconnected marine food web.

Because marine ecosystems function as connected systems rather than isolated species, changes affecting one component of the food web have the potential to influence other components that depend upon it.

For this reason, I respectfully submit that the assessment of underwater noise should consider not only individual species, but also the broader ecological relationships that sustain the Gippsland marine environment.

4.4 Marine Mammals and Habitat Use

The project area supports protected marine mammals including Humpback Whales, The endangered Southern Right Whales, Rare Burrunan Dolphins, Common Dolphins, Australian Fur Seals and Long-nosed Fur Seals.

Marine mammals rely heavily on sound for communication, navigation, locating prey, maintaining social groups and enabling communication between mothers and calves.

I have received reports based on studies from the Dolphin Research Institute advising that the Gippsland coast is more than simply a migration corridor for Humpback Whales. ***The Institute advised that these waters also provide important feeding and resting habitat, including for mothers travelling with calves for weeks at a time.***

This distinction is significant because whales occupying the area for extended periods may be exposed to construction activities for longer than animals simply passing through during migration.

Given the importance of acoustic communication to marine mammals, I submit that consideration should extend beyond migration alone and include the potential effects of prolonged underwater noise on feeding, resting, communication and mother-calf interactions.

Chapter Finding

The Gippsland marine environment is a connected ecosystem extending from the microscopic organisms that form the base of the food web through to protected marine mammals at the highest trophic levels.

While the study documents propose measures to reduce underwater noise, I remain concerned that uncertainty persists regarding the effectiveness of those measures and the potential implications for the broader marine ecosystem over the duration of construction and the life of the project.

5. - Commercial Fishing

Commercial fishing has operated throughout the Gippsland region for generations and remains an important contributor to regional employment, local communities and Australia's domestic seafood supply.

The Australian Fisheries Management Authority (AFMA) states:

> *"In 2020, over 3,000 tonnes of Commonwealth-managed seafood were landed through the Port of Lakes Entrance by 36 Commonwealth-managed fishing vessels, representing approximately 38% of Victoria's Commonwealth-managed seafood landings."*

This demonstrates the national significance of Gippsland's commercial fishing industry. Commercial fishing is not a future economic opportunity, it is an existing industry that already supports regional jobs, coastal communities and the supply of fresh Australian seafood.

The documents acknowledge that commercial fishing activities occur within and around the project area and include a Commercial Fisheries Response Framework. The project documentation also discusses opportunities for affected commercial fishers to participate in project related employment and services.

While these opportunities may benefit some individuals, they should not be viewed as a substitute for preserving an established commercial fishing industry. Employment associated

with the project is fundamentally different from supporting businesses that have operated in the region for generations and contribute to Australia's food security.

Healthy marine ecosystems and sustainable fisheries are essential to maintaining the supply of fresh Australian seafood for families, supporting regional communities and preserving the long term viability of the fishing industry.

Mitigation Measure ***CRF-M08*** also recognises that compensation may be available where commercial fishers experience impacts or are unable to continue fishing within all or part of the operating offshore wind farm area.

The project's own summary material acknowledges that construction may displace fishing activity and that impacts may be managed through advance notice, compensation and possible work opportunities for affected commercial fishers.

In my view, the need for compensation and alternative work opportunities is itself an acknowledgement that commercial fishing businesses may be adversely affected. Compensation cannot replace access to productive fishing grounds, long-established fishing practices, regional seafood supply or the intergenerational value of Gippsland's commercial fishing industry.

The inclusion of employment opportunities and compensation measures is, in itself, an acknowledgement that commercial fishing businesses may experience adverse impacts. While compensation may address financial loss for some operators, it cannot replace access to productive fishing grounds, established businesses, regional seafood production or the long term cultural and economic contribution of Gippsland's commercial fishing industry.

6. – Visual Amenity and Coastal Character

6.1 Key Finding

Star Of The South acknowledges that this project will permanently alter the visual character of the Gippsland coastline. While the assessment concludes that many visual impacts can be mitigated or are considered acceptable, I remain concerned that the long term effects on landscape character, coastal amenity and community values have not been fully demonstrated.

6.2 The Gippsland Coast

The Gippsland coastline is recognised for its natural landscapes, open ocean views and relatively undeveloped character.

These coastal environments are valued by residents and visitors for recreation, tourism, fishing, wildlife observation and their scenic qualities.

The visual character of the coastline is an important environmental and community value in its own right.

6.3 Permanent Change to the Landscape

The Star of the South project would permanently transform the visual character of the Gippsland coastline by introducing large-scale industrial infrastructure into a marine environment that is currently defined by open ocean views and a largely undeveloped coastal horizon.

The project includes offshore wind turbines, offshore substations and associated infrastructure that would remain in place for several decades.

The development would also require aviation and marine navigation lighting throughout its operational life. This would introduce ongoing artificial light into an area currently characterised by naturally dark coastal and marine environments, changing the night-time character of the coastline.

These changes are not temporary. They would remain for the operational life of the project and represent a lasting alteration to the natural landscape, affecting the visual amenity, scenic values and coastal character of the Gippsland region for decades to come.

The summary material acknowledges visual impacts and states that site selection may avoid major population centres and shield some views. However, avoiding some views does not remove the long term visual transformation of the marine environment. The presence of turbines, substations and lighting for decades remains a material change to the natural coastal character.

6.4 Community Experience

Visual impacts are experienced differently by individuals.

For many people, the value of the Gippsland coastline extends beyond recreation. It includes a sense of place, cultural identity, connection to the natural environment and appreciation of relatively undeveloped coastal landscapes.

While visual simulations provide an indication of how the project may appear under selected conditions, they cannot fully represent how the landscape may be experienced across different seasons, weather conditions or times of day.

6.5 Cumulative Visual Change

The Star of the South project should also be considered within the broader context of other offshore wind developments proposed across Gippsland.

If multiple projects proceed, the cumulative change to the marine landscape may extend beyond that assessed for an individual project.

In my view, cumulative visual impacts warrant careful consideration alongside the environmental, social and economic effects discussed elsewhere in this submission.

Chapter Finding

The Gippsland coastline is valued for its natural character and expansive marine environment.

I remain concerned that the long term change to the coastal landscape and the broader community experience has not been fully demonstrated, particularly in the context of multiple offshore wind developments proposed across Gippsland.

The visual impacts are not limited to construction. Once operational, turbines, offshore substations, navigation lighting and associated infrastructure would remain a permanent industrial presence within the marine environment for approximately 35 years. This represents a long term transformation of one of Victoria's most recognisable coastal landscapes rather than a temporary disturbance.

7. – Onshore Infrastructure

7.1 Key Finding

The Star of the South project extends well beyond the offshore wind farm itself. Export cables, cable landfall, onshore substations, construction compounds and transmission infrastructure are all essential components of the proposal and contribute to its overall environmental, social and economic footprint.

7.2 The Complete Project

The proposed development is often described as an offshore wind farm; however, the exhibited documents demonstrate that the project comprises a much larger and interconnected network of offshore and onshore infrastructure.

In addition to offshore turbines and foundations, the project includes:

- Offshore export cables.
- Cable landfall.
- Onshore underground cables.
- Onshore substations.
- Temporary construction compounds.

- Access roads and construction traffic.
- Connection to Victoria's electricity transmission network.

Each of these components has its own environmental footprint and should be considered as part of the overall assessment rather than in isolation.

7.3 Construction Impacts

A range of construction activities associated with the onshore components of the project, including excavation, vegetation disturbance, heavy vehicle movements, temporary work compounds, noise and increased construction traffic.

Although mitigation measures are proposed, these activities have the potential to affect nearby cultural land,protected and endangered wildlife, landholders, local roads, surrounding businesses and the broader community during construction.

7.4 Transmission Infrastructure

The offshore wind farm cannot operate without connection to the Victorian electricity network.

While aspects of the broader transmission network may be assessed through separate planning processes, the associated transmission infrastructure is fundamental to the delivery of electricity generated by the project.

The project material also identifies construction compounds, port use, vessel activity, access requirements and associated infrastructure as part of the broader development. This supports my concern that the project should not be assessed as offshore turbines alone, but as a linked offshore, coastal and onshore industrial development.

For this reason, I submit that the environmental and community implications of the overall electricity transmission system should be considered alongside the offshore development where relevant.

7.5 My Assessment

The environmental footprint of the Star of the South project extends beyond the marine environment.

The combined impacts of offshore infrastructure, export cables, landfall, substations, construction activities and transmission infrastructure should be considered collectively when assessing the project's overall environmental, social and economic effects.

Chapter Finding

The Star of the South project is an integrated offshore and onshore development.

While elements of the transmission network may be assessed through separate planning processes, they are fundamental to the operation of the project. The environmental assessment should therefore consider the full development footprint rather than treating offshore generation and onshore transmission as unrelated projects.

I submit that all components of the project, including associated onshore infrastructure and electricity transmission requirements, should be considered together when evaluating the overall impacts of the proposal.

8. – Economics, Employment and Long-Term Project Viability

8.1 Key Finding

While the documents identify potential economic and employment benefits associated with the Star of the South project, uncertainty remains regarding project delivery, long term costs, the assumptions underpinning economic modelling and whether the projected benefits are proportionate to the scale and long term impacts of the proposed development.

8.2 Project Timeframes

The project is expected to require several years of construction before becoming operational.

Publicly available project information indicates that Star of the South may not be fully operational until the late 2030s. This timeframe is relevant when considering the project's role within Victoria's broader energy transition and the assumptions underpinning projected economic benefits.

8.3 Economic Modelling

The Jacobs report commissioned by Star of the South presents projected economic benefits, including potential household electricity savings under specific modelling scenarios.

While these projections provide useful information, they rely on numerous assumptions regarding electricity demand, future market conditions, transmission infrastructure, policy settings, project delivery and broader energy market outcomes.

Economic modelling is inherently dependent on assumptions. Where projected benefits rely upon future electricity demand, transmission delivery, policy settings, technology performance and construction schedules, those assumptions should be clearly distinguished from demonstrated outcomes.

8.4 Long-Term Costs

The Star of the South project represents a significant long term infrastructure investment involving offshore construction, export cables, substations, transmission infrastructure, maintenance over several decades and eventual decommissioning.

The Inquiry should consider not only the upfront costs of the project, but also the long term financial commitments associated with maintenance, replacement of major components, environmental monitoring, rehabilitation and decommissioning.

Transparency regarding these long term responsibilities is particularly important given the expected lifespan of the project.

8.5 Employment

Star of the South has stated that the project may support up to 200 long term operational and maintenance jobs once the wind farm is operational over its 35 year lifespan

Employment opportunities are an important consideration. However, they should be assessed alongside the potential impacts including impacts on commercial fishing, tourism and other existing industries that already provide long term employment and economic value throughout Gippsland.

Commercial fishing is an established industry that supports regional communities and contributes fresh Australian seafood to domestic markets. Tourism also provides ongoing employment for accommodation providers, hospitality businesses, retailers, charter operators and many other local enterprises.

The proponent's summary material refers to jobs, training, procurement and work opportunities. While these are relevant considerations, they should be weighed against potential disruption to existing industries including commercial fishing, tourism and local businesses. New project related employment should not be treated as a substitute for protecting existing industries that already operate in the region

I submit that the Inquiry should carefully consider whether the projected long term employment benefits are proportionate to the overall scale of industrial development proposed and the potential impacts on existing industries, the natural environment and coastal communities.

8.6 Existing Industry Concerns

During my review of the project, I also considered information published by industry organisations representing 60,000 Australian businesses.Expressing concerns regarding offshore wind development, including project costs, delivery timeframes and implementation challenges.

While differing views exist regarding these matters, they demonstrate that questions remain concerning the long term economic assumptions associated with large scale offshore wind development.

8.7 My Assessment

The economic benefits identified should be considered alongside the uncertainties associated with project delivery, future market conditions and the assumptions underpinning economic modelling.

For a project of this scale, the assessment should consider not only the potential economic benefits, but also the potential effects on existing industries, regional employment, Australia's domestic seafood supply, coastal communities and the long term character of the Gippsland coast.

Chapter Finding

The Star of the South project represents one of the first largest infrastructure developments proposed for Victoria's marine environment.

While potential economic and employment benefits, uncertainty remains regarding project delivery, long term costs and whether the projected benefits are proportionate to the environmental, social and economic impacts associated with the proposal.

I respectfully submit that these matters warrant careful consideration before approval decisions are made.

9. – Long-Term Operation, Operational Risks and Decommissioning

9.1 Key Finding

The Star of the South project is expected to operate for several decades before eventual decommissioning. While the EES/EIS documents outline a framework for long term management, uncertainty remains regarding operational risks, emergency response, environmental rehabilitation and end of life obligations.

9.2 Long-Term Operation

The environmental impacts of the project extend well beyond construction.

Once operational, the offshore wind farm will require ongoing inspection, maintenance, vessel movements, component replacement and environmental monitoring throughout its operational life.

These activities represent a long term industrial presence within the Gippsland marine environment and should be considered alongside the impacts of construction.

9.3 Operational Risks

Large offshore wind turbines operate in a challenging marine environment and may be exposed to storms, lightning, corrosion, wave action and mechanical wear over many decades.

Operational risks may include:

- Blade damage or blade failure.
- Turbine fires.
- Lightning strikes.
- Oil or hydraulic fluid leaks.
- Damage to offshore electrical infrastructure.
- Loss of components or debris during severe weather.
- Vessel collisions and emergency response incidents.
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The EIS material identifies operational-phase risks and impacts including underwater noise, artificial lighting, vessel activity, oil spill risk, electromagnetic fields, displacement, attraction to infrastructure and turbine collision risk. While many are assessed as low or negligible after mitigation, the number and variety of operational impact pathways demonstrates that the project would create an ongoing industrial presence in the marine environment for decades.

While these events may be infrequent, they are reasonably foreseeable operational risks for infrastructure of this scale and duration.

9.4 Emergency Response and Environmental Rehabilitation

Where operational incidents occur, effective emergency response is essential to minimise environmental impacts.

I respectfully submit that consideration should be given to:

- Procedures for responding to turbine fires in offshore conditions.
- Retrieval of blade fragments and other debris from the marine environment where safe and practicable.
- Management of oil, hydraulic fluids and other pollutants.
- Environmental monitoring following operational incidents.
- Rehabilitation of affected marine environments where impacts occur.

Given the ecological significance of the Gippsland coast, these matters warrant careful consideration throughout the operational life of the project.

9.5 Decommissioning

Star Of The South recognises that the project will eventually be decommissioned at the end of its operational life.

However, the methods, technologies and regulatory requirements applicable at that time will inevitably evolve over coming decades.

While this is understandable, it also means that important aspects of environmental rehabilitation, waste management and restoration cannot yet be fully defined.

Given the size and complexity of the proposed development, I submit that decommissioning should receive the same level of scrutiny as construction and operation.

While decommissioning is acknowledged, many details remain to be determined decades into the future. Given the scale of the proposal, the Inquiry should be satisfied that legally enforceable financial assurances are sufficient to ensure rehabilitation costs remain with the project proponent throughout the life of the project

*9.6 Long-Term Financial Responsibilit*y

The long-term costs associated with maintaining, rehabilitating and ultimately decommissioning offshore infrastructure should be clearly understood before project approval.

Appropriate financial assurance mechanisms should ensure that the responsibility for decommissioning, environmental rehabilitation and long term management remains with the project proponent and does not become a future burden on taxpayers or governments.

Chapter Finding

The Star of the South project represents a multi decade commitment extending from construction through to eventual decommissioning.

Uncertainty remains regarding operational risks, emergency response, environmental rehabilitation and end of life responsibilities. Given the environmental significance of the Gippsland marine environment, I respectfully submit that these matters should be carefully considered before approval decisions are made.

10. – Conclusions and Recommendations

Overall Conclusion

This submission has been prepared following a detailed review of the exhibited Victorian Environment Effects Statement (EES), the Commonwealth Environmental Impact Statement (EIS), specialist technical reports, publicly available project information and correspondence received during my review of the project.

The Star of the South proposal represents the first of huge scale industrial developments ever proposed for Victoria's marine environment. Its impacts extend beyond the offshore wind farm itself to include construction activities, underwater noise, export cables, onshore infrastructure, long term operation, maintenance and eventual decommissioning.

Throughout my review, I have identified a number of areas where uncertainty remains despite the extensive technical work undertaken. These include cumulative impacts, impacts on protected birds and marine mammals, underwater noise, commercial fishing, tourism, visual amenity, onshore infrastructure, long term operational risks, decommissioning and the assumptions underpinning parts of the project's economic assessment.

Many of these matters rely on predictive modelling, future management plans or adaptive management measures that will be implemented after project approval. While these approaches are recognised components of environmental assessment, they ***do not remove*** the uncertainty that exists today.

Where uncertainty remains regarding nationally protected species, long term ecosystem impacts and cumulative effects, the precautionary principle should be applied.

Given the environmental significance of the Gippsland coast and the proposed scale and duration of the project, I submit that the remaining uncertainties warrant careful consideration before approval decisions are made.

Recommendations

I respectfully request that the Inquiry give particular consideration to:

1. Whether the cumulative environmental, social and economic impacts of the project have been adequately assessed over its full life cycle.

2. Whether sufficient certainty has been demonstrated regarding impacts on protected birds, marine mammals and the broader marine ecosystem.

3. Whether the potential effects of prolonged underwater noise on the marine food web and protected species have been adequately assessed.

4. Whether the long-term implications for commercial fishing, Australia's domestic seafood supply, tourism and existing regional industries have been fully considered.

5. Whether the environmental and community impacts of associated onshore infrastructure and transmission requirements have been adequately assessed.

6. Whether the long-term operational risks, emergency response arrangements, environmental rehabilitation and decommissioning obligations have been sufficiently demonstrated.

7. Whether the projected economic and employment benefits are proportionate to the scale of the proposed development and have been assessed alongside the potential impacts on existing industries and coastal communities.

8. Whether the precautionary principle should be applied where material uncertainty remains regarding impacts on protected environmental values.

Closing Statement

I appreciate the opportunity to provide this submission and request that the matters raised throughout this document be carefully considered by the Inquiry.

The Gippsland coast is one of Victoria's most environmentally significant marine regions. It supports internationally recognised migratory birds, protected marine mammals, productive commercial fisheries, valued tourism assets and coastal communities that have developed alongside these natural environments over many generations.

Throughout the exhibition process, many community members have taken the time to review thousands of pages of technical documentation, attend information sessions, seek clarification from the proponent and prepare detailed submissions. These concerns have now been formally placed on the public record.

In my submission, the responsibility rests with the proponent to demonstrate that impacts have been reduced to an acceptable level, rather than with the community to demonstrate that unacceptable impacts will occur.

If this project proceeds, those concerns should not simply be acknowledged; they should remain part of the public record against which future environmental outcomes and project commitments can be assessed. Transparency and accountability will be essential throughout the life of the project.

While the EES and EIS propose mitigation measures and compensation frameworks for some impacts, no amount of compensation can replace a healthy marine ecosystem, established commercial fisheries, internationally significant wildlife habitat or the unique natural character of the Gippsland coastline.

This proposal requires decision makers to carefully weigh the long term environmental, social and economic trade offs associated with the project.

Australia's contribution to global greenhouse gas emissions is relatively small, yet this proposal would introduce large scale industrial infrastructure into a marine environment recognised for its high biodiversity, protected species and existing industries.

The project also represents a long term commitment requiring ongoing maintenance, vessel activity, component replacement and, ultimately, decommissioning. Electricity generation will depend on prevailing wind conditions, while the environmental footprint and associated infrastructure would remain for decades.

Once this marine environment and coastal landscape are fundamentally altered, it may not be possible to restore them to their current condition. While many impacts may be capable of mitigation, others, including changes to marine ecosystems, habitat use, landscape character and community values may not be readily reversible once the project is constructed.

For the reasons outlined throughout this submission, the proposed Star of the South Offshore Wind Project has not demonstrated, to a sufficient level of certainty, that its environmental, social and economic impacts can be managed to an acceptable level. Accordingly, I submit that the project should **not** be approved.

Emma Jade
Gippsland Coastal Land Owner
Wildlife Volunteer Rescuer
No Offshore Turbines Ninety Mile Beach

References / Documents Reviewed

This submission has been prepared following a review of the exhibited Victorian Environment Effects Statement (EES), Commonwealth Environmental Impact Statement (EIS), supporting specialist technical reports, publicly available project information, and correspondence received during my review of the project.

The principal sources relied upon include:

Chapter 2 – Assessment of Cumulative Impacts:

- Victorian Environment Effects Statement (EES)
- Commonwealth Environmental Impact Statement (EIS)
- EIS Summary Report
- Relevant specialist technical reports

Chapter 3 – Birds, Migratory Species and Collision Risk:

- EES Chapter 12 - Offshore Ornithology and Bats
- Commonwealth EIS - Offshore Ornithology and Bats
- Technical Report E - Offshore Ornithology and Bats
- Collision Risk Model (CRM) and Residual Risk Assessment tables
- EIS Summary Report - Birds and Biodiversity
- Correspondence received directly from Star of the South regarding bird collision modelling, turbine air gap mitigation and proposed management measures.

Chapter 4 – Underwater Noise and Marine Ecosystem:

- EES Chapter 11 – Marine Biodiversity
- Commonwealth EIS - Marine Mammals and Turtles
- Technical Report I - Underwater Noise Assessment
- EIS Summary Report - Marine Mammals
- Correspondence received directly from Star of the South regarding underwater noise mitigation measures.

Chapter 5 – Commercial Fishing:

- EES Chapter 16 - Social, Economic and Land Use
- Commercial Fisheries Response Framework (CRF-M08)
- EIS Summary Report - Fisheries
- Australian Fisheries Management Authority (AFMA) information
- Correspondence received directly from Star of the South regarding commercial fisheries management and compensation measures.

Chapter 6 – Visual Amenity and Coastal Character:

- Landscape and Visual Impact Assessment
- EIS Summary Report - Landscape, Visual Amenity and Coastal Character
- Project visual simulations

Chapter 7 – Onshore Infrastructure:

- EES Project Description
- Onshore infrastructure and planning documentation
- EIS Summary Report - Project Infrastructure

Chapter 8 – Economics, Employment and Long-Term Project Viability:

- EES Chapter 16 - Social, Economic and Land Use

- Jacobs Economic Modelling commissioned by Star of the South
- EIS Summary Report - Employment and Economic Benefits
- Publicly available project information and industry publications referred to within this submission.

Chapter 9 – Long Term Operation, Operational Risks and Decommissioning:

- Operational management and decommissioning sections of the EES and Commonwealth EIS
- EIS Summary Report
- Relevant specialist technical reports addressing operational management, environmental monitoring and decommissioning.

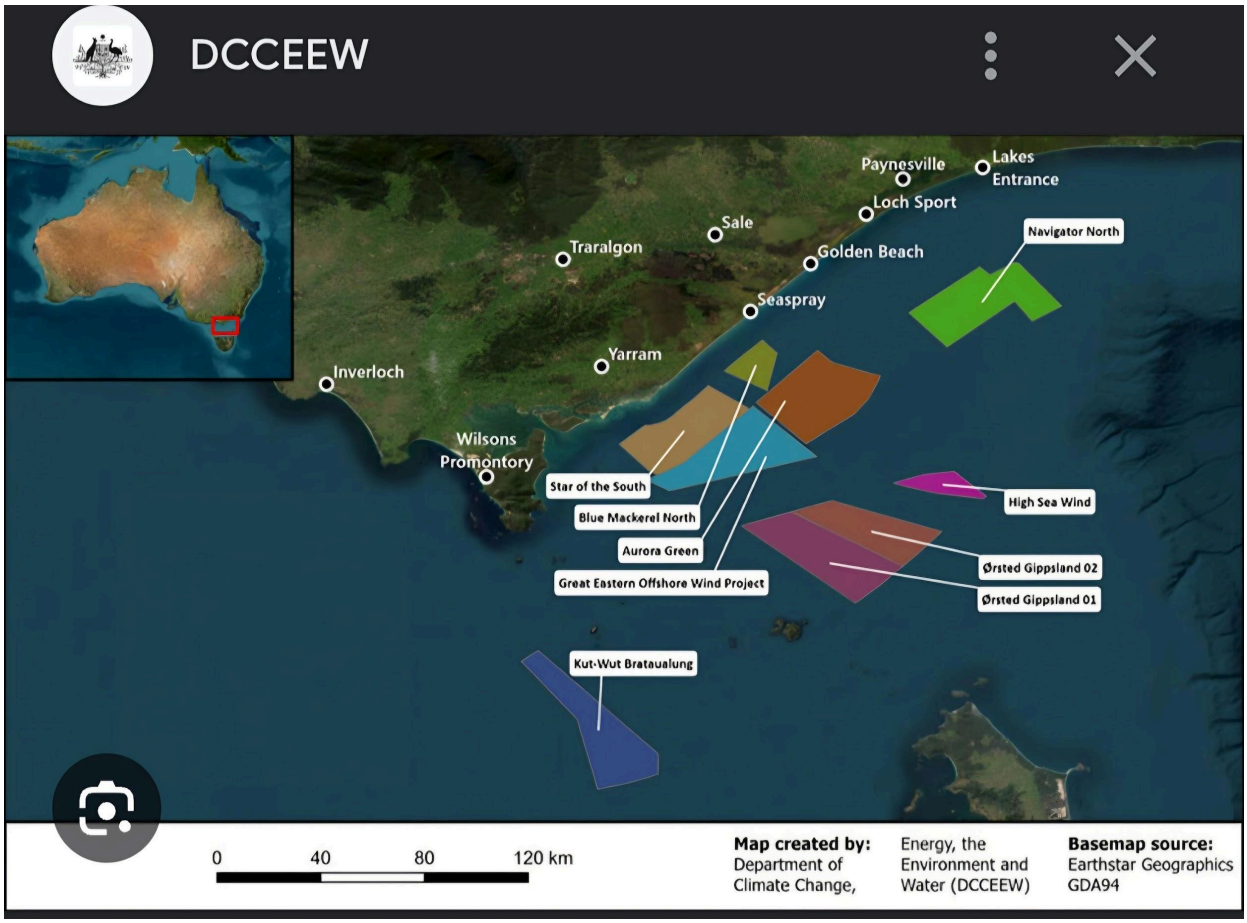
Additional material reviewed throughout this submission:

- Correspondence received directly from Star of the South.
- Publicly available information published by Star of the South.
- Relevant Australian Government guidance and publicly available information where referenced.
- Australian Fisheries Management Authority (AFMA) publications were referenced.
- Other exhibited specialist technical reports relevant to the matters discussed.

This list identifies the principal documents and sources relied upon in preparing this submission and is not intended to represent an exhaustive list of every document reviewed.

Appendix A – Supporting Maps, Figures and Correspondence

Figure A1. *Gippsland Offshore Renewable Energy Zone.*

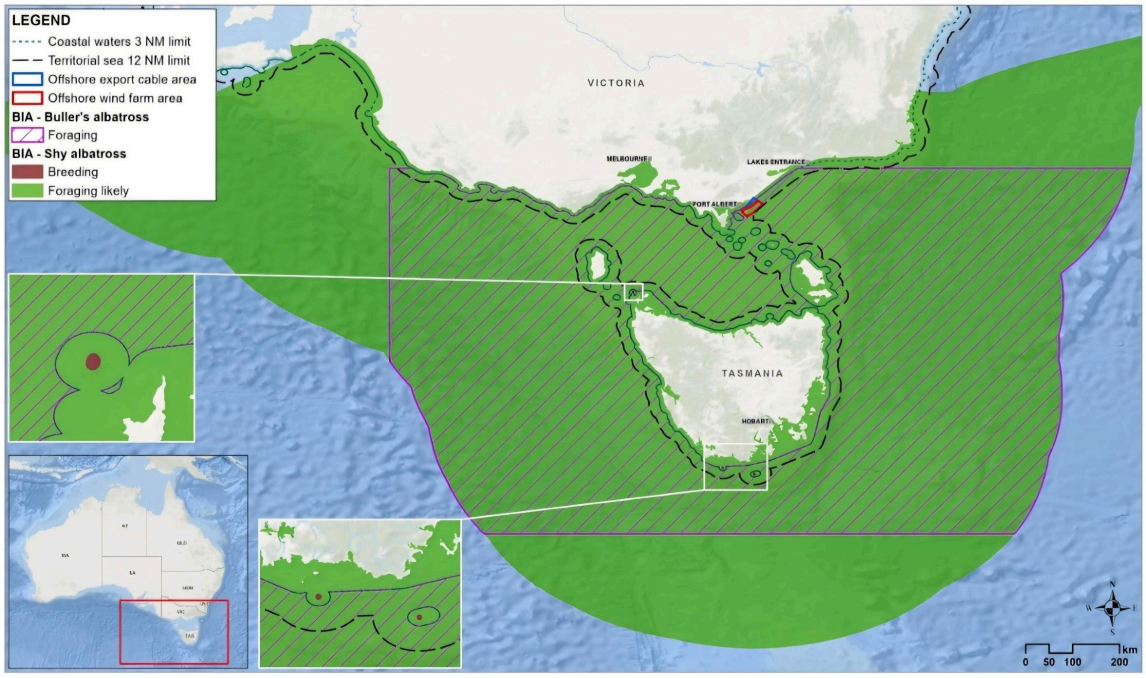


Offshore wind feasibility licence areas within the Gippsland declared area. This map illustrates the number and proximity of proposed offshore wind developments that should be considered when assessing cumulative environmental, social and economic impacts, rather than assessing projects in isolation.

Source: Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW). Offshore Wind Program – Gippsland feasibility licence areas. Basemap: Earthstar Geographics (GDA94).

Figure A2. *Biologically Important Areas – Shy Albatross and Buller's Albatross.*

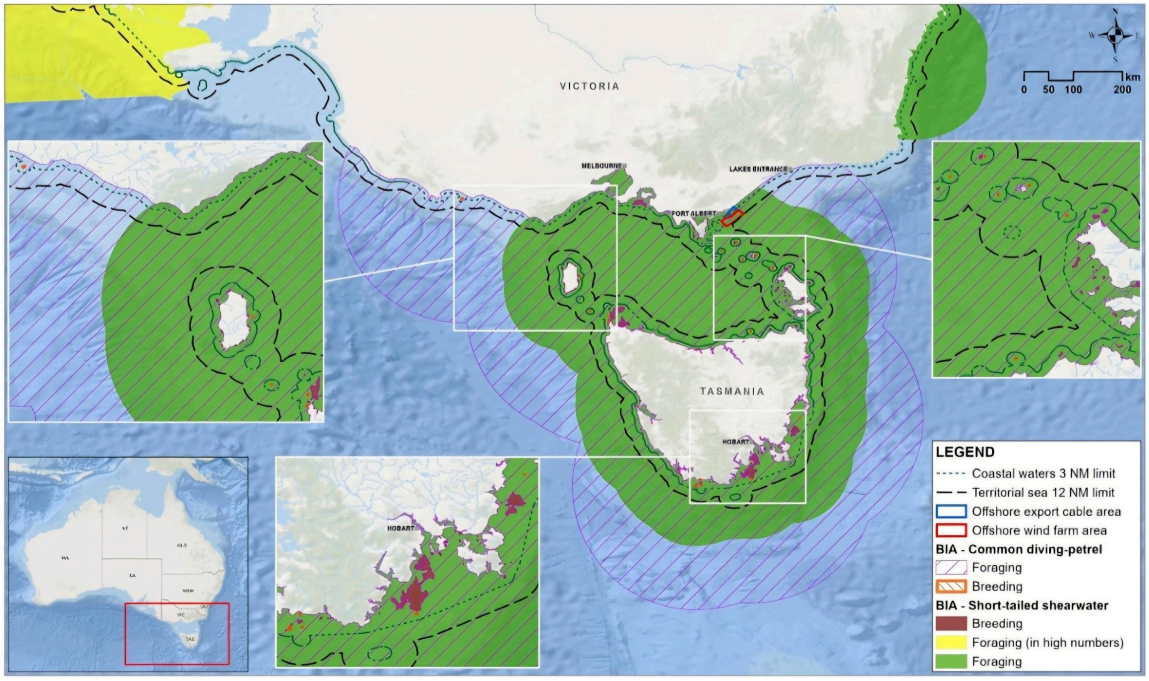
Figure 12-3 Biologically Important Areas (biologically important areas) for Shy Albatross and Buller's Albatross.



These figures, taken from the proponent's own assessment, show that the proposed offshore wind development overlaps with Biologically Important Areas used by Shy Albatross and Buller's Albatross. They highlight the ecological importance of the project area for protected seabirds and reinforce the need to carefully consider collision risk, displacement and cumulative impacts.

Figure A3. *Biologically Important Areas – Common Diving-Petrel and Short-tailed Shearwater.*

Figure 12-4 Biologically important areas for Common Diving-Petrel and Short-tailed Shearwater.



These figures, taken from the proponent's own assessment, illustrate that the proposed offshore wind development overlaps with Biologically Important Areas used by Common Diving-Petrels and Short-tailed Shearwaters. They demonstrate the ecological importance of the project area for protected seabirds and reinforce the need to carefully consider collision risk, displacement and cumulative impacts.

Source: Star of the South Offshore Wind Farm Pty Ltd (2025). Commonwealth Environmental Impact Statement – Chapter 12: Offshore Ornithology and Bats.

Figure A4. *Email correspondence from the Dolphin Research Institute.*

Research Fellow 27 Jan

to me

Hi Emma,

I hope this email finds you well.

Please find attached a PDF copy of the Dolphin Research Institute's white paper titled "More Than a Migratory Corridor: Humpback Whale Feeding and Calving in Bass Strait".

This white paper reports on the observations of humpback whales feeding and calf presence in Bass Strait. It presents evidence that changes the understanding of Bass Strait's ecological importance to humpback whales. This new information should be considered in environmental assessments, policy development, and offshore management decisions.

Please let me know if you have any questions or if you would like to chat more about the white paper.

Ella Hutchinson | BSc (Hons I)
Research Fellow
Dolphin Research Institute
M: 0411 728 221 | **E:** research@dolphinresearch.org.au

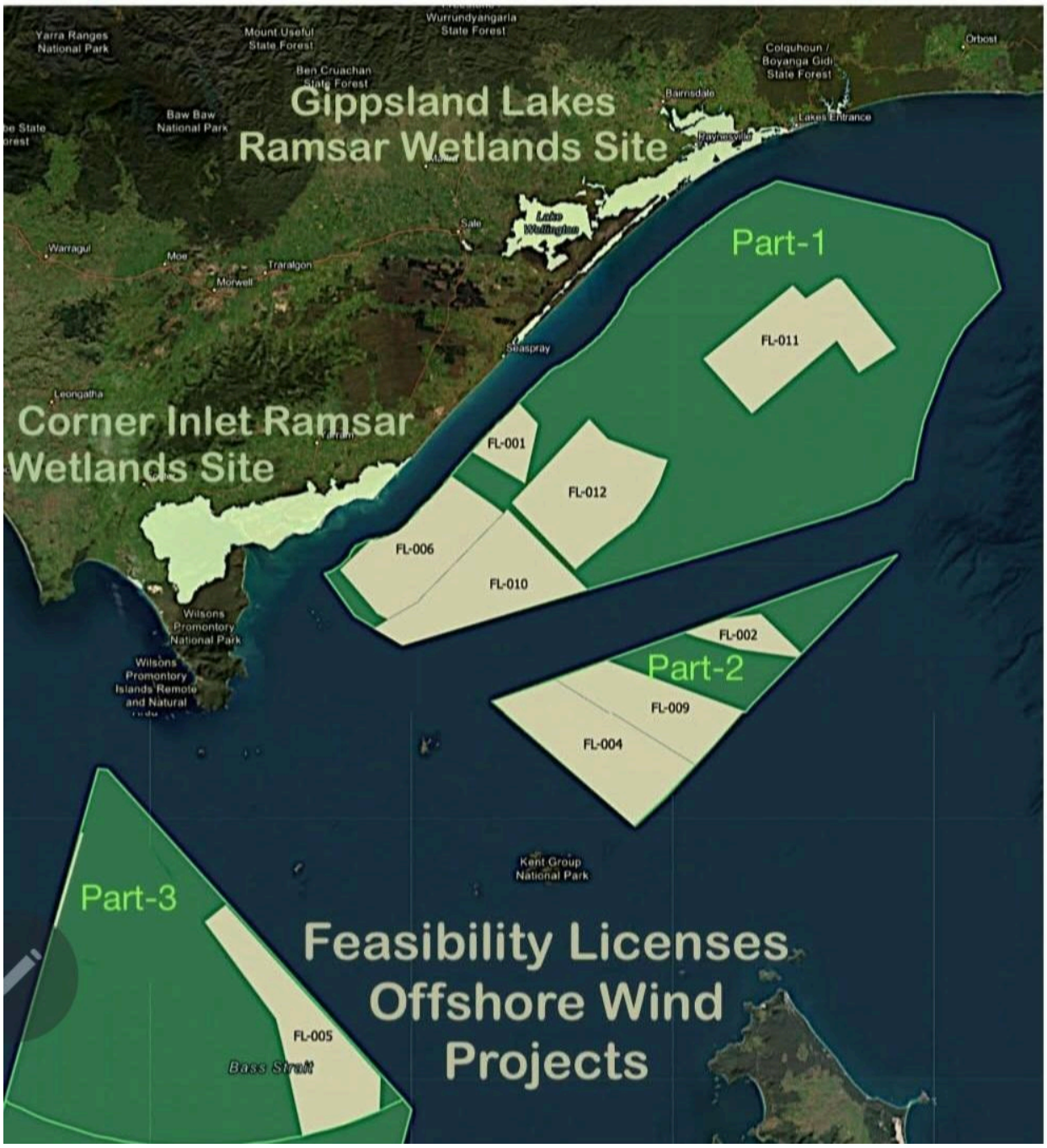
This email correspondence from the Dolphin Research Institute accompanied its white paper, More Than a Migratory Corridor: Humpback Whale Feeding and Calving in Bass Strait. It highlights evidence that Bass Strait is not simply a migration route but also supports feeding and calf presence, reinforcing the ecological importance of the region and the need for these values to be carefully considered in environmental assessment and offshore development decisions.

Source: Dolphin Research Institute. Personal email correspondence to Emma Jade, 27 January 2026.
Dolphin Research Institute (2025). More Than a Migratory Corridor: Humpback Whale Feeding and Calving in Bass Strait.

Report: https://www.dolphinresearch.org.au/more-than-a-migratory-corridor/

Figure A5. *Spatial Relationship Between Offshore Wind Licence Areas and Ramsar Wetlands*

Gippsland offshore Renewable Energy Zone



This map illustrates the location of the Gippsland Offshore Renewable Energy Zone and the remaining offshore wind feasibility licence areas in relation to the Gippsland coastline and the internationally significant Corner Inlet and Gippsland Lakes Ramsar wetlands. It provides regional context for the scale and proximity of the proposed offshore wind developments to

nationally and internationally recognised environmental values, highlighting the importance of considering cumulative impacts across the broader marine ecosystem.

Source: Compiled by the author of this map, using publicly available information from the Australian Government Offshore Wind Program and publicly available feasibility licence mapping.