Eden-1
Kelp Aquaculture Farm
Disaster Bay, NSW

Submissions Response Report

DOCUMENT DETAILS

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GLOSSARY OF TERMS

Aquaculture	The farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants.
Backbone / Mainline	Section of horizontal longline infrastructure that supports seeded kelp lines.
Benthic	Related to or occurring on the bottom of a body of water.
Biodeposit	Organic matter that settles from aquaculture operations, such as faeces or uneaten feed.
Development footprint	The area that would be impacted directly by the Project (including temporary and permanent impacts).
Dropper line	Vertical lines suspended from a longline that kelp grows on.
Ecklonia radiata	A species of kelp native to Australian coastal waters.
Environmental Impact Statement (EIS)	A document assessing the likely environmental effects of a proposed development.
Fouling	The unwanted accumulation of organisms such as algae, barnacles, mussels, and other marine life on surfaces like kelp, ropes, nets, and other farm infrastructure.
Lease area	A defined area of seabed granted for use by an aquaculture operator.
Longline	A taut horizontal line anchored to the seafloor suspended in the water column by floats used for aquaculture.
Mitigation	Measures taken to reduce adverse impacts on the environment.
Outplanting	Process of transferring hatchery-grown juvenile kelp (seeded onto ropes or lines) from controlled nursery conditions into the ocean
Pelagic	Relating to the open sea, away from the coast or sea floor.
Project Site	The area that is being investigated for siting of the Project.
Project	Eden-1 Kelp Farm, Disaster Bay, NSW.
Proponent	Auskelp Pty Ltd.
Seeding	The process of attaching young kelp or algae to grow-out lines.
Sorus/Sori	A sorus is a specialised reproductive area on kelp fronds of ferns where reproductive cells are formed.
Taxa	Groups of living organisms that are classified together in a biological classification.
Upwelling	An oceanographic phenomenon that brings nutrient-rich water to the surface.
Zoospores	Microscopic swimming spores released from reproductive tissue (sori) on mature kelp plants, which settle and grow into the next generation.

ACRONYMS AND ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
ALR Act	Aboriginal Land Rights Act 1983 (NSW)
AMSA	Australian Maritime Safety Authority
BRA	Biosecurity Risk Assessment
BC Act	Biodiversity and Conservation Act 2016 (NSW)
CP Act	Coastal Protection Act 1979 ()
CLM Act	Crown Land Management Act 2016 (NSW)
CM Act	Coastal Management Act 2016 (NSW)
CRC	Cooperative Research Centre
DAFF	Department of Agriculture, Fisheries and Forestry
DCCEEW	Department of Climate Change, Energy, the Environment and Water (can be either Commonwealth or NSW government)
DGRs	Director-General's Requirements
DPHI	Department of Planning, Housing and Infrastructure
DPIRD	Department of Primary Industries and Regional Development (NSW)
EAC	East Australian Current
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EP&A Act	Environmental Planning and Assessment Act 1979 NSW)
EPA	Environmental Protection Authority (NSW)
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999 (Cth)
FM Act	Fisheries Management Act 1994 (NSW)
IPC	Independent Planning Commission
IPNP	Interested Parties Notification Program (Auskelp)
KGUR	Knowledge Gaps Uncertainty Register
LALC	Local Aboriginal Land Council
LGA	Local Government Area
MNES	Matters of National Environmental Significance
NES	National Environmental Significance
NPW Act	The National Parks and Wildlife Act 1974 (NSW)
NPWS	National Parks and Wildlife Service
NSW	New South Wales
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
RAN	Royal Australian Navy
RAP	Registered Aboriginal Party
REAP	Registered Environmental Assessment Practitioner
SEPP	State Environmental Planning Policies (NSW)
SSD	State Significant Development
SRR	Submissions Response Report
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

Introduction

This Submissions Response Report **(SRR)** has been prepared by Auskelp Pty Ltd in response to submissions received during the public exhibition of the proposed Eden-1 Kelp Aquaculture Farm, located in offshore waters of Disaster Bay, New South Wales (SSD-41680467).

The proposed 200 ha development comprises the establishment and operation of a commercial offshore kelp aquaculture farm cultivating the native species *Ecklonia radiata* within Aquaculture Lease AL21/004, approximately 1.1 kilometres offshore from Greenglades Beach in Disaster Bay. The Project seeks to be the second approved *Ecklonia radiata* lease area in NSW (49.5 ha of already approved *Ecklonia radiata* lease area in Twofold Bay 25 km north), and seeks to be the first active offshore kelp aquaculture development in Australia, with the ultimate objective to support and establish a new sustainable marine industry in New South Wales.

The Environmental Impact Statement **(EIS)** for the Project, and associated supporting documents, were publicly exhibited by the NSW Department of Planning, Housing and Infrastructure (**DPHI**) in accordance with the requirements of the Environmental Planning and Assessment Act 1979 and the Secretary's Environmental Assessment Requirements **(SEARs)**. During the exhibition period, a total of 241 submissions were received, comprising 212 objections, 23 submissions in support, and 6 comments. In addition to public submissions, fourteen (14) NSW Government agencies and authorities provided formal advice in relation to the Project and the exhibited EIS. No petitions or form letters were received regarding the Project.

This Submissions Response Report has been prepared in accordance with the *NSW State Significant Development Guidelines – Preparing a Submissions Report* (DPHI, 2026).

The purpose of the report is to:

- summarise the submissions received during exhibition;
- identify and analyse the key issues raised;
- provide responses to matters raised by government agencies, organisations and members of the public;
- outline actions, refinements and additional information prepared following exhibition; and
- provide an updated evaluation and justification of the Project.

Many submissions raised multiple issues. Accordingly, the total number of issue references discussed throughout this report exceeds the total number of submissions received.

The key themes raised in submissions included:

- coastal character and visual amenity;
- marine ecology and biodiversity;
- whales and marine mammal interactions;
- fishing and recreational access;
- navigation and maritime safety;
- water quality and marine debris;
- tourism and regional character;
- Aboriginal cultural heritage;
- project location and site selection; and
- the adequacy of the EIS and supporting technical studies.

In response to submissions and agency advice, the Proponent has undertaken further review of the Project and has provided additional documentation, clarification and refinement where appropriate. This includes the preparation of supplementary technical information, refinement of management plans and monitoring frameworks, and additional commitments relating to marine fauna management, biosecurity, environmental monitoring and maritime archaeology.

The issues raised during exhibition have been carefully considered by Auskelp and its specialist advisory team. Having regard to the submissions received, the additional information provided in this SRR, the proposed mitigation measures, and the adaptive environmental management framework proposed for the Project, Auskelp considers that the Eden-1 Kelp Aquaculture Farm remains in the public interest and is suitable for approval subject to appropriate conditions.

Analysis of Submissions

The Environmental Impact Statement for the proposed Eden-1 Kelp Aquaculture Farm (SSD-41680467) was publicly exhibited by the NSW Department of Planning, Housing and Infrastructure (DPHI) in accordance with the Environmental Planning and Assessment Act 1979 and the Secretary's Environmental Assessment Requirements.

During the 28-day exhibition period (10 April 2026 – 8 May 2026) a total of 241 submissions were received from members of the public, organisations, local aboriginal stakeholders and ten (10) government agencies (including the local council). Four (4) additional agency submissions were received after the formal exhibition period and these were also addressed within this submissions report.

Public submissions included objections, submissions in support, and general comments.

Of the 241 overall submissions (of which 229 are individuals) received during the exhibition period, 44 submissions (18.3%) originated from less than 5km from the project site – Wonboyn the immediate surrounding locality. A further 42 submissions (17.4%) originated from within 100 km of the project. Submissions from broader areas greater than 100 km away from the Project comprised 155 submissions (64.3%).

Of the 229 public submissions received during the public exhibition period, 208 submissions (90.8%) raised objections to the Project, 16 submissions (7.0%) expressed support, and 5 submissions (2.2%) provided general comments. The relatively high proportion of objecting submissions reflects the level of public interest in the Project based on the introduction of a novel marine industry to the Disaster Bay area, and objections were likely amplified by a targeted online campaign which objected to the Project.

Submission Breakdown

Table 1 Number of Submissions Received

Type	Support	Object	Comment	Total
Public	16	208	5	229
Organisation	7	4	0	11
Local Council	-	-	1	1
Agency Advice	-	-	14	14

The objections raised have been reviewed and categorised into 22 key thematic areas to assist in the preparation of this SRR. Many submissions raised multiple issues and these detailed groupings can be viewed in the attached Appendix RA1 Submissions Response Matrix.

No NSW Government agencies objected to the Project, however some agencies requested additional clarification, refinement or further information. Key themes raised by agencies included maritime archaeology, marine fauna management, biosecurity planning, environmental monitoring, navigation safety and operational management measures. DPHI, as lead assessment agency, raised no objection to the Project but issued a Request for Information covering 24 matters — with particular emphasis on justification of the proposed scale, the staging and adaptive-management framework, and environmental performance

monitoring — alongside visual amenity, marine fauna, biosecurity, heritage, fishing interactions, infrastructure design, risk-assessment methodology and citations.

Submissions in support of the Project generally highlighted the potential for the Eden-1 Kelp Aquaculture Farm to establish a new sustainable marine industry within New South Wales, while contributing to regional employment, scientific research, aquaculture innovation and long-term economic diversification within the Eden and South Coast region. Supportive submissions commonly referenced the Project's potential social and economic benefits, including local job creation, utilisation and upgrade of existing marine infrastructure, downstream processing opportunities, research and development capability, and broader community and regional economic benefits associated with establishing Australia's first offshore kelp aquaculture industry.

Submissions objecting to the Project primarily raised concerns relating to the potential impact of the development on the coastal character and wilderness values of Disaster Bay, marine ecology and biodiversity, whales and marine mammal interactions, visual amenity, fishing access, navigation and maritime safety, and the appropriateness of the Project location. A number of submissions also raised concerns regarding the perceived uncertainty associated with first-of-kind offshore kelp aquaculture operations in Australia and the adequacy of the environmental assessment undertaken.

Independent Planning Commission Determination

Following completion of the public exhibition process and review of submissions received, the NSW DPHI confirmed that the number of unique public objections to the Project exceeded the 50 Objection threshold prescribed under section 2.7 of the State Environmental Planning Policy (Planning Systems) 2021. As a result, the consent authority for the Eden-1 Kelp Aquaculture Farm will be the Independent Planning Commission **(IPC)**.

Under the SSD assessment framework, DPHI will continue detailed assessment of the Project, including review of this SRR, agency advice, technical documentation and any additional information requested during the assessment process. Following completion of the Department's assessment, DPHI will prepare an Assessment Report and recommendation for consideration by the IPC.

The IPC is an independent statutory consent authority responsible for determining certain SSD applications within New South Wales. As part of the determination process, the IPC may decide to conduct public meetings, hearings or briefings and will consider the exhibited EIS, submissions received during exhibition, this SRR, agency advice, the Department's assessment report and all other relevant material prior to making a final determination regarding the Project.

Actions Taken Since Exhibition

Following commencement of the public exhibition period for the Eden-1 Kelp Aquaculture Farm Environmental Impact Statement, Auskelp undertook a range of engagement, communication and ongoing project activities associated with the exhibition process and continuing research and development program, as follows:

- On 10 April 2026, email notification of the commencement of public exhibition was distributed to 536 Interested Parties and Registered Aboriginal Parties (**RAP**) contained within the Project stakeholder database. The notification included direct links to the NSW Government Major Projects Portal and publicly exhibited project documentation, and detailed options to support or oppose the project.
- NSW DPHI wrote formal letters to all Wonboyn landholders informing them that the State Significant Development public exhibition process had begun for the proposed Kelp Aquaculture Farm in Disaster Bay.
- Throughout the exhibition period, Auskelp maintained publicly accessible project information via the Auskelp website, including direct access links to the EIS documentation, supporting technical reports and the NSW Government exhibition portal to facilitate transparent public access to project information.

- Auskelp participated in a public radio interview with ABC South Coast Radio during the exhibition period, which provided general information regarding the exhibition process and the importance of community feedback via the NSW Government portal.
- Direct responses were provided to all email enquiries received during the exhibition period.
- Auskelp are monitoring publicly available community discussions relating to the Project, including local community social media forums and public discussion pages, to remain informed of community concerns and emerging issues raised during exhibition.
- On 3 May 2026, six (6) days prior to the close of the exhibition period, a further email notification was distributed to the 536 Interested Parties and RAPs advising of the upcoming exhibition closing date and again providing links to the NSW Government Major Projects Portal and EIS documentation, and detailed options to support or oppose the project.
- On 1 June 2026, Auskelp provided an update to 547 interested parties advising that the Eden-1 Kelp Aquaculture Project will be determined by the Independent Planning Commission (IPC) following receipt of more than 50 unique objections during the public exhibition period. The update also advised that Auskelp is preparing a detailed Submissions Response Report and additional information requested by DPHI before the Project proceeds to the next stage of assessment.
- Ongoing discussions were conducted with local community members, with all direct communications being responded to within 48 hours.
- Auskelp continued its ocean testing and research program within Disaster Bay under the existing Section 37 research and testing approvals associated with the Project. This included the continued monitoring of offshore test infrastructure and the seeding of juvenile *Ecklonia radiata* kelp lines for monitoring during the 2026 ocean testing season. Ongoing testing continues to contribute operational, environmental and cultivation data relevant to the proposed aquaculture operations.
- Ongoing meetings and consultation with Government Agencies to adequately respond to Agency advice and information requests, including Port Authority, NSW Heritage (Aboriginal and European), DPIRD Fisheries, DPHI, Transport for NSW, Maritime NSW.
- Meetings with external advisors, technical consultants, subject matter experts.
- Prepared a visual assessment report.
- Prepared Assessment of Significance report.
- Prepared a Phase 1,2 & 3 GIS data coordinates table.
- Prepared new reports: Biosecurity Risk Assessment, Knowledge Gaps Uncertainty Register, Technical Testing and Development Report, Social Impact Assessment Adequacy Report
- Updated the following Management Plans based on advice provided: Environmental Management Plan, Biosecurity Plan, Marine Fauna Interaction Plan, Emergency Response plan.

Response to Submissions

This Submissions Report provides an analysis of the issues raised, explains what actions have been taken by the applicant since the EIS was exhibited, provides a response to issues raised, and delivers an updated justification and evaluation of the project.

In accordance with the *State Significant Development Guidelines – Preparing a Submissions Report 2026*, this SRR endeavours to be concise, easy to understand and proportionate. The depth and extent of analysis has been carefully considered against the environmental significance, technical complexity, level of public interest, and regulatory relevance of the matters raised in submissions and agency advice.

Project Justification

The Eden-1 Kelp Aquaculture Farm represents a strategically significant opportunity to establish a new sustainable marine industry within New South Wales through the cultivation of the native kelp species *Ecklonia radiata* in an offshore environment. The Project has been informed by more than five years of research, ocean testing, environmental assessment, stakeholder engagement, and has been designed to operate without the use of feed, fertilisers, freshwater or chemical additives. The Project supports regional economic diversification, scientific research, aquaculture innovation and local employment opportunities while utilising existing marine and industrial infrastructure within the Eden region.

The Eden-1 Kelp Aquaculture Project represents a sustainable, low-impact development that supports regional diversification and environmental stewardship. The local community, Traditional Owners, the marine industry, and government regulators have been updated throughout the project development, and the Project aligns with both Commonwealth, State and Regional government planning objectives. Through appropriate site location, evidence-based testing and design, and robust environmental review and management, the Project avoids any significant impacts. The Project delivers a new and regenerative marine industry in Southern NSW that delivers quality natural products, an ongoing contribution to climate mitigation, biodiversity enhancement, and adds Blue Economy jobs in southern NSW.

The EIS and supporting technical assessments conclude that the potential environmental, social and operational impacts of the Project can be appropriately avoided, minimised, managed and monitored through the proposed mitigation measures, adaptive environmental management and ongoing regulatory oversight. Having regard to the matters raised during exhibition, the additional information provided within this SRR, and the broader strategic, environmental and economic benefits associated with the development of sustainable offshore aquaculture in New South Wales, the Project remains justified and in the public interest.

1.0 INTRODUCTION AND BACKGROUND

1.1 Project Description

Auskelp is proposing the development of a 200-hectare offshore seaweed farm located in Disaster Bay, southern New South Wales. Located approximately 23 km southwest of Eden, the farm will cultivate native kelp species *Ecklonia radiata* using longline infrastructure designed for open ocean environments. The Project's goal is to develop positive, sustainable kelp farming in NSW waters. The biomass created from operations will be used for human food products, nutraceutical extracts, and liquid fertilisers.

The Eden-1 farm will deploy modular 1-hectare kelp rigs within the proposed lease area (AL21/004), located >1.1 km offshore. Each rig includes low-profile, sub-surface longlines anchored to the seafloor, supporting vertical droppers which will be annually seeded with locally propagated kelp sporophytes. No permanent structures will be installed. Operations occur seasonally, with activities including deployment, monitoring, maintenance, and harvest conducted via vessels operating from Snug Cove and Edrom, in Twofold Bay. All marine infrastructure is removable and designed to minimise ecological disruption. The Kelp Aquaculture Farm will use longline structures which are used globally for seaweed cultivation, and similar to those already being used in Twofold Bay, Jervis Bay and Port Stephens for mussel aquaculture.

The Project proposes to grow >1,500 tonnes of wet seaweed annually and ultimately employ 30 full-time staff to meet the increasing demand for domestically produced, sustainably sourced seaweed. To meet commercial demand, reliable biomass requires consistent ocean cultivation and appropriate processing and storage infrastructure. The quality and quantity of kelp biomass directly determines the market viability of downstream products. Without sufficient biomass, industries seeking to utilise regenerative seaweed cannot be developed. Therefore, establishing offshore kelp farms are fundamental to unlocking the environmental and economic potential of the seaweed sector in NSW and Australia.

Figure 1: Regional map (including Eden and Wonboyn) with the proposed kelp farm indicated by the green rectangle (Source: Google Maps).

Auskelp began hatchery and open ocean testing of *Ecklonia radiata* in 2022, with ocean trials continually undertaken in both Twofold Bay and Disaster Bay since 2023. These trials have focused on assessing, refining and documenting offshore kelp farming of *Ecklonia radiata* in high-energy ocean conditions. Through extensive field testing, monitoring and adaptive design, Auskelp has demonstrated secure and consistent

biomass growth in exposed offshore settings. To date, the Auskelp offshore testing program objectively represents one of the most successful offshore kelp farming program for this species, globally.

1.2 Project Location

The proposed lease area is not located within a declared Marine Park, Aquatic Reserve, direct whale migration corridor or recognised whale concentration area. The surrounding coastline adjoins terrestrial conservation areas, including Nadgee Nature Reserve and Beowa National Park, but does not overlap with any protected areas or statutory exclusion zones under New South Wales or Commonwealth legislation. The site is not located within, nor does it directly affect any Matters of National Environmental Significance **(MNES)** protected under the *Environment Protection and Biodiversity Conservation Act 1999* **(EPBC Act)**, and does not intersect with any Commonwealth-declared protected areas or other EPBC-listed conservation overlays.

The farms offshore location was selected to minimise visual impacts and maintain separation from residential areas and sensitive coastal viewpoints. The nearest land-based point is 1.1 kilometres offshore from Greenglades Beach, with all operational infrastructure positioned low above the water column and designed to be visually discreet from land-based viewpoints. The Project is not directly visible from any residential dwelling, the nearest being 3.1 km away (North Wonboyn) at the closest point, and site selection and infrastructure designs have been carefully considered to minimise prominence, balancing navigation requirements with coastal separation to reduce potential impacts on visual amenity and coastal character.

Figure 2: AL21/004 Lease, Disaster Bay NSW, with minimum distances to key viewing areas (Source: Google and Auskelp).

1.3 Legislative Context

The Eden-1 Kelp Aquaculture Farm is being assessed as State Significant Development **(SSD)** under the Environmental Planning and Assessment Act 1979 **(EP&A Act)** and the State Environmental Planning Policy (Planning Systems) 2021, which identifies aquaculture development within environmentally sensitive coastal waters as a SSD. The Project has been assessed in accordance with the Secretary's Environmental Assessment Requirements **(SEARs)** issued by the NSW Department of Planning, Housing and Infrastructure **(DPHI)**, together with the relevant provisions of the Environmental Planning and Assessment Regulation 2021 and applicable NSW Government SSD assessment guidelines. In addition to the EP&A Act framework, the Project has been assessed having regard to relevant provisions of the Fisheries Management Act 1994, Marine Safety Act 1998, Crown Land Management Act 2016, Protection of the Environment Operations Act

1997, Biosecurity Act 2015 and other relevant NSW and Commonwealth legislation applicable to offshore aquaculture development, marine environmental management, navigation safety, biodiversity protection, Aboriginal cultural heritage, European heritage and coastal management. The Project has also been considered in the context of applicable strategic planning and aquaculture policy frameworks supporting the development of sustainable marine industries within New South Wales.

As part of the SSD assessment process, the Project was required to undergo a comprehensive Environmental Impact Statement **(EIS)** assessment in accordance with the issued SEARs issued by DPHI. The EIS included specialist technical studies addressing marine ecology, biodiversity, visual impacts, navigation and maritime safety, Aboriginal cultural heritage, water quality, noise, social and economic impacts, biosecurity, fisheries interaction and other relevant environmental and operational considerations associated with the proposed offshore aquaculture development. Following completion of the EIS, the Project was placed on public exhibition by DPHI to enable review and feedback from government agencies, stakeholders, Registered Aboriginal Parties (**RAPs**), community members and the broader public. The exhibition process generated a range of submissions relating to environmental, social, economic and procedural matters associated with the Project. The issues raised during exhibition have been reviewed and are addressed within this Submissions Response Report **(SRR)**, together with additional clarification, management measures and technical information where appropriate.

1.4 Exhibition Stage

The Environmental Impact Statement for the Eden-1 Kelp Aquaculture Farm (SSD-41680467) was publicly exhibited by the NSW DPHI between 10 April 2026 and 8 May 2026 in accordance with the requirements of the Environmental Planning and Assessment Act 1979 and the State Significant Development assessment process.

During the exhibition period, the EIS documentation and supporting technical reports were made publicly available through the NSW Government Major Projects Portal. The exhibition process provided government agencies, Registered Aboriginal Parties, stakeholders, local community members and the broader public with the opportunity to review the Project documentation and provide formal submissions regarding the proposed development.

Access to the EIS Documentation remain available at the following locations:

NSW Government Planning Portal

The NSW Government Major Projects Planning Portal provides public access to the exhibited Environmental Impact Statement (EIS), supporting technical studies and appendices, agency advice, public submissions, project correspondence, assessment documentation and other information relevant to the State Significant Development assessment process for the Eden-1 Kelp Aquaculture Farm.

https://www.planningportal.nsw.gov.au/major-projects/projects/seaweed-aquaculture-lease-disaster-bay-eden-1-0

Auskelp Website – Planning Portal and EIS Document

The Auskelp website provides publicly accessible information relating to the Eden-1 Kelp Aquaculture Farm, including project updates, annual reports, frequently asked questions, technical and background information regarding the proposed development, videos associated with the Project and ocean testing program, recordings of public consultation activities and information sessions, and direct links to the NSW Government Major Projects Planning Portal and exhibited EIS and Project documentation.

https://www.auskelp.net

Documentation on the NSW Government portal include:

- the Environmental Impact Statement;
- specialist and technical assessments;
- supporting mitigation plans and measures;

- and other associated project information relevant to the assessment of the Project
- all submissions and associated attachments.

Members of the public were able to make submissions directly to DPHI throughout the 28-day exhibition period. Submissions received included objections, submissions in support of the Project and general comments (neither objecting or supporting) relating to environmental, social, economic and procedural aspects of the proposed development.

In addition to public submissions, DPHI referred the Project to relevant government agencies and public authorities for review during the assessment. These agencies provide comments, recommendations and feedback on the aspects of the Project within their respective areas of responsibility, informing both the Department's assessment and the further information sought from the Proponent. Like public submissions, this agency advice is publicly available via the NSW Government Planning Portal, and the Proponent's responses to the matters raised by each agency are set out in this report.

Following completion of the exhibition period, all submissions received became publicly available via the Government Planning Portal on 10 May 2026. On 12 May 2026, the NSW Department of Planning, Housing and Infrastructure (DPHI) formally requested that Auskelp prepare a Submissions Response Report (SRR) in accordance with section 59(2) of the Environmental Planning and Assessment Regulation 2021 and the State Significant Development Guidelines. The Department also requested that responses to issues raised by government agencies and authorities be incorporated within the SRR.

2.0 ANALYSIS OF SUBMISSIONS

2.1 Number of Submissions

During the 28-day exhibition period (10 April 2026 – 8 May 2026) a total of 241 public submissions relating to the Project were received during the exhibition period, and are classified as follows:

- 229 public submissions (including duplicates and double-lodgement)
- 11 organisations
- 1 local council (Bega Valley Shire Council)
- 1 duplicate response was received
- 1 double-lodgement was received
- Zero (0) petitions were received
- Zero (0) form letters were received
- 14 submissions with advice from government agencies

Of the 241 public submissions (of which 229 are individuals) received during the exhibition period, 44 submissions (18.3%) originated from less than 5km from the project site – Wonboyn the immediate surrounding locality. A further 42 submissions (17.4%) originated from within 100 km of the project. Submissions from broader areas greater than 100 km away from the Project comprised 155 submissions (64.3%). No undisclosed locations were identified within the public submission dataset.

Public submissions included objections, submissions in support, and general comments. The issues raised have been reviewed and categorised into 22 key thematic areas to assist in the preparation of this SRR. Many submissions raised multiple issues and these groupings can be viewed in the response visualisation matrix attached as Appendix RA1 Submissions Response Matrix.

No NSW Government agencies objected to the Project, however several agencies requested additional clarification, refinement or further information. Key themes raised by agencies included maritime archaeology, marine fauna management, biosecurity planning, environmental monitoring, navigation safety and operational management measures. DPHI, as lead assessment agency, raised no objection to the Project but issued a requests for Information covering 24 matters — with particular emphasis on justification of the proposed scale, the staging and adaptive-management framework, and environmental performance monitoring — alongside visual amenity, marine fauna, biosecurity, heritage, fishing interactions, infrastructure design and risk-assessment methodology.

A breakdown of the submissions by type (i.e., support, object, comment) is detailed in Table 2, as follows:

Table 2 Number of Submissions Received

Type	Support	Object	Comment	Total
Public	16	208	5	229
Organisation	7	4	0	11
Local Council	-	-	1	1
Agency Advice	-	-	14	14

Organisational Submissions

Eleven (11) submissions were received from organisations, as follows:

- South Coast Sea Urchins Pty Ltd
- Regional Circularity Cooperative (RCC) and Bega Circular Valley (BCV)
- Ocean2Earth Pty Ltd
- ECOS Australia Foundation

- Pentarch Forestry
- Pentarch Offshore Solutions
- Regional Development Australia Southern NSW and ACT (RDASNA)
- Bega Group Ltd
- Eden Local Aboriginal Land Council
- National Parks Association: Far South Coast Branch
- WildLive Media

NSW Government Agencies

Fourteen (14) submissions were from New South Wales government agencies, as follows:

- DPIRD Agriculture
- Conservation Planning and Assessment
- Bega Valley Shire Council
- Crown Lands
- DPIRD Fisheries
- NSW National Parks and Wildlife Service (**NPWS**)
- Heritage NSW (Aboriginal Cultural Heritage)
- Heritage NSW (European / Maritime Heritage)
- Port Authority of NSW
- DPIRD Food Authority & Biosecurity
- Transport for NSW (received 20 May 2026)
- DCCEEW (received 28 May 2026)
- DPHI (received 5 June 2026)
- DPIRD Food Authority and Biosecurity (received 16 June 2026)

2.2 Geographic Analysis

Table 3 Origin of Public Submissions Received

Community Interest	Distance from Site	Number of submissions	Percentage
Local	<5 km	44	18.3%
Regional	5-100 km	42	17.4%
Broader	>100km	155	64.3%
Total		**241**	**100%**

The geographic distribution of submissions demonstrates that a significant number of submissions (64.3%) originated from >100 km from the Project, and outside of the Wonboyn, Wonboyn North, Kiah, Eden, Pambula, Merimbula, Tura Beach, Tathra, Bega and Candelo.

Response Groupings

Of the 229 public submissions received during the exhibition period, 95 submissions (41.5%) were lodged anonymously. A review of the public submissions identified that a number of submissions were lodged by individuals sharing common surnames and residential localities, indicating that multiple responses were received from members of the same family or household groups.

Based on surname analysis within the submission dataset, 98 distinct family groups were identified across the 229 public submissions received. Family groupings comprised two or more individual submissions, however several larger family groupings were identified, the largest family grouping comprised seven (7) individual submissions associated with the same surname. While all individual submissions were assessed on their own

merits, the surname analysis demonstrates that a high proportion of submissions originated are likely related household or family groupings.

2.3 Breakdown of Public Submissions

Of the 229 public submissions received during the public exhibition period, 208 submissions (90.8%) raised objections to the Project, 16 submissions (7.0%) expressed support, and 5 submissions (2.2%) provided general comments. 90 objectors were anonymous (43.3% of objectors) and 3 supporters were anonymous (18.8% of supporters).

Themes raised in submissions

Submissions in support of the Project most commonly highlighted the following matters:

- the strategic opportunity to establish a new sustainable marine industry within New South Wales;
- the use of a native species (*Ecklonia radiata*) and the absence of feed, fertiliser, freshwater or chemical inputs to the marine environment;
- the potential climate-related benefits associated with regenerative seaweed cultivation;
- the use of existing port, marine and industrial infrastructure in the Eden region;
- the contribution of the Project to regional employment and economic diversification;
- alignment of the Project with NSW Government aquaculture, seaweed industry and Blue Economy policy frameworks; and
- the contribution to scientific research, innovation, and skills development in the South Coast region.

Objecting submissions most commonly focused on the following matters:

- impacts on the coastal character and wilderness values of Disaster Bay;
- proximity of the Project to Nadgee Nature Reserve;
- marine ecology and biodiversity values, including kelp ecosystems and rocky reef habitats;
- concerns for whales, dolphins and other marine fauna;
- visual amenity from the coastline, beaches and adjacent reserves;
- navigation and maritime safety within Disaster Bay;
- marine debris generation and microplastics;
- kelp washing up on the beaches;
- water quality, sedimentation and potential cumulative impacts;
- fishing and recreational access to Disaster Bay;
- tourism, regional character and amenity of the Wonboyn locality;
- Aboriginal cultural heritage values within and adjacent to the lease area;
- appropriateness of the proposed Project location and the site-selection process;
- adequacy of the Environmental Impact Statement and supporting technical studies; and
- the precedent the Project may set for future offshore aquaculture development.

Thematic convergence objections (based on response analysis)

- 78% invoke "pristine / wilderness / untouched / sacred / sanctuary"
- 55% "industrial" size
- 51% adjacency to Nadgee Nature Reserve or national park

- 44% whale or marine-mammal entanglement
- 37% marine debris or infrastructure breaking loose
- 33% visual amenity
- 29% insufficient research
- 21% plastics / microplastics
- 16% First Nations
- 10% are one-liners, examples as follows: "I don't want anything to negatively impact on the marine life. Leave the animals and environment alone." and, "It is a pristine environment and we don't want a factory in our bay."

2.4 Breakdown of Organisational Submissions

Eleven (11) submissions were received from organisations during the public exhibition period. Seven (7) organisations lodged submissions in support of the Project and four (4) organisations raised objections. Supporting submissions were received from commercial entities operating in related industries (forestry, port logistics, sustainable seafood and circular-economy enterprises, and the largest employer in the region, Bega Group), regional development and industry-coordination bodies, and businesses with operations co-located in the Eden region. Objections were received from environment-focused, not-for-profit organisations, a wildlife media group and an Aboriginal land council.

The organisations that lodged submissions, and the position, are summarised in Table 4 below.

Table 4 Organisational Submissions

Organisation	Position
South Coast Sea Urchins	Support
Regional Circularity Cooperative (RCC) and Bega Circular Valley (BCV)	Support
Ocean2Earth	Support
Pentarch Forestry	Support
Pentarch Offshore Solutions	Support
Regional Development Australia Southern NSW and ACT (RDASNA)	Support
Bega Group Ltd	Support
ECOS Australia Foundation	Object
Eden Local Aboriginal Land Council	Object
Far South Coast National Parks Association	Object
WildLive Media	Object

2.5 Public Response Methodology

To respond to the matters raised in a structured and proportionate manner, this Submissions Response Report will group public and organisational submissions into 22 thematic response categories. This categorisation has been adopted to ensure that the diverse range of matters raised — including those raised in support, objection and as general comment — can be addressed individually and in an appropriate level of detail.

2.6 Government Agency Advice

Fourteen (14) submissions were received from New South Wales Government Agencies and authorities during the public exhibition period. Several Agencies identified additional information requirements or recommended refinements to specific management plans, monitoring commitments or operational procedures.

Agency advice received during exhibition is summarised in Table 5 below. Detailed responses to each matter raised by NSW Government Agencies are provided in Section 5.0 Response to Agencies.

Table 5 Government Agency and Council Advice Summary

Agency	Position	Principal Matters Raised
DPIRD Agriculture	No objection	Project does not impact agricultural land, resources, services or facilities. No further comment required.
DPIRD Food Authority (Biosecurity)	Supportive	Site is a suitable choice for seaweed for human consumption. Food licensing under the Food Act 2003 may apply at the processing stage to be determined by the operator once operational.
Bega Valley Shire Council	No objection	No further issues identified following review of the EIS and supporting documents.
Conservation Planning and Assessment (DCCEEW)	No objection	EIS is consistent with the Biodiversity Development Assessment Report (BDAR) waiver provisions. No further comment on terrestrial biodiversity values or application of Biodiversity Assessment Method.
Crown Lands (DPHI)	No objection	Crown waterway within Disaster Bay and East Boyd Bay identified; proponent encouraged to consult Transport for NSW as Crown Land Manager at Snug Cove; Native Title assessment to be undertaken by DPIRD Fisheries as the authorising authority.
Port Authority of New South Wales	Supportive (with additional information required)	Confirmation of navigation marker specifications, maintenance and communication protocols requested; ongoing vessel movement coordination; use of Port Authority facilities subject to commercial agreement; clarification of vessel traffic baseline figures; ongoing engagement on detailed design and operations.
NSW National Parks and Wildlife Service	Supportive (with additional information required)	Notification and prompt clean-up of project-related debris on Nadgee Nature Reserve beaches; update to the Marine Fauna Interaction Plan; update to the Emergency Response Plan.
Heritage NSW (European / Maritime Heritage)	Additional information required – MAA completed	Preparation of a Maritime Archaeology Assessment (MAA) by a suitably qualified maritime archaeologist, reviewing the side-scan sonar, underwater drone, aerial drone and seabed inspection surveys; clarification and discussion of the unnamed wreck shown in Figure 3 of the Biosis ACHAR.
Heritage NSW (Aboriginal Cultural Heritage)	Additional information required – Appendices A-E provided	All Aboriginal community consultation documentation (Appendices A to E of the ACHAR) to be provided to Heritage NSW for review.
DPIRD Fisheries	Supportive (with additional information required)	Eight specific matters identified: correct DPIRD referencing; note that the Coastal Protection Act 1979 has been repealed; support for seasonal benthic and water quality sampling; preparation of Assessment of Significance for additional FM Act-listed threatened species; revisions to the Marine Fauna Interaction Management Plan; completion of broodstock collection statement; Biosecurity Plan as a standalone document; Environmental Management Plan amendments.
Transport for NSW	No objection	TfNSW has reviewed the information submitted to support this State Significant Development and has no objections to the proposal.

Agency	Position	Principal Matters Raised
Department of Climate Change, Energy, Environment and Water NSW (DCCEEW)	Additional information required	Detailed, precautionary and transparent risk-based assessment of the Eden- 1 seaweed aquaculture proposal's biosecurity risks — specifically further information on ecological consequences, pathways for spread, genetic and stock management, climate/emerging risks, monitoring and adaptive management, and the justification of residual risk and uncertainty — rather than relying on qualitative assumptions that risks are negligible.
Department of Planning, Housing and Infrastructure (DPHI)	Additional Information required	24 specific information requests, including: local character and amenity, project scale and staging, scientific evidence, whale interactions, beach-cast kelp, land-based infrastructure, use of port facilities, Aboriginal stakeholder engagement, maritime heritage, social impact assessment, statutory context, employment generation, commercial fishing interactions, industry value chain, infrastructure design, threatened species assessments, biologically important areas, vessel movements, risk evaluation, and consolidation of management, mitigation and monitoring measures, citation review.
DPIRD (Aquatic)	Additional Information required	Additional detail requested regarding hatchery biosecurity, disease and pathogen risk assessment, introduced marine pests, monitoring, incident response and Biosecurity Act compliance.

3.0 ACTIONS TAKEN SINCE EXHIBITION

3.1 Introduction

Following the completion of the public exhibition period on 8 May 2026, Auskelp has commenced a structured program of post-exhibition activities to address the matters raised in submissions and the advice received from NSW Government agencies. These activities have been undertaken to support the Department's ongoing assessment of the Project and to inform the preparation of this Submissions Response Report (SRR). The actions undertaken since exhibition are summarised in the sections below and are reflected in the response to issues raised at Section 4.0, Section 5.0 and the associated Appendix documents.

3.2 Analysis of Responses

Auskelp completed a thorough evaluation of all matters raised in submissions and in the advice provided by NSW Government agencies. Each issue was reviewed against the exhibited EIS, the supporting technical assessments and the proposed management plans, and assessed for whether refinement, additional information or further commitment was warranted.

The evaluation undertaken by Auskelp included:

- review of every public submission;
- categorisation of submissions raised by the public were classified into the 22 thematic response to allow for a structured response;
- review of each item of Agency advice received during exhibition;
- assessment of each issue against the relevant section of the exhibited EIS, supporting technical assessments and proposed mitigation measures;
- identification of any matters requiring additional technical work, supplementary assessment or external specialist input;
- review and update of the management plans appended to the EIS, including the Marine Fauna Interaction Plan, Emergency Response Plan, Biosecurity Plan and Environmental Management Plan, Cultural Heritage Response Plan;
- consideration of agency-specific information requests, including those raised by Heritage NSW, DPIRD Fisheries, NPWS, Port Authority of NSW and Crown Lands and DPHI;
- review of statutory references and citations within the EIS for consistency with current legislation and current agency naming;
- responses presented in Section 4.0 and Section 5.0 of this report.

3.3 Project Amendments and Refinements

No changes to the project description (lease area, species, infrastructure design or operational profile and operational commitments) are proposed in response to submissions and agency advice. Based on Agency feedback and community comments Auskelp has made a series of amendments and refinements that sit within the existing project description and that are reflected in updated Management Plans detailed in Section 4.0 and Section 5.0 and documented in the attached Appendix RA, Appendix RB and Appendix RC documents.

3.4 Further Community and Stakeholder Engagement

Following the close of the exhibition period, Auskelp has continued direct engagement with stakeholders who participated in the exhibition process.

Engagement activities undertaken since exhibition include:

- direct email communication to Interested Parties;
- continued availability of publicly accessible project information through the Auskelp website and the Interested Parties Notification Program (IPNP) distribution list;
- ongoing response to community enquiries received via email, telephone and Auskelp website;
- email communication and collaboration meeting (26 May 2026) with Eden Local Aboriginal Land Council and follow up email;
- continued update to Registered Aboriginal Parties (RAPs);
- provide Heritage NSW with the requested Aboriginal Cultural Heritage Assessment Report (ACHAR) and supporting consultation appendices; and
- continued engagement with government agencies regarding including the provision of additional information requested during exhibition as detailed in Section 5.0.

3.5 Further Assessment and Technical Work

In response to Agency advice received during exhibition, Auskelp has commissioned additional technical work. The principal technical work undertaken since exhibition is summarised below:

New specialist assessments commissioned or prepared

- Commissioned a Maritime Archaeology Assessment (MAA) of the AL21/004 lease area, prepared by a suitably qualified and experienced maritime archaeologist accredited through the Australian Institute for Maritime Archaeology and recognised by Heritage NSW, in response to Heritage NSW advice (Appendix RB6).
- Commissioned additional comprehensive side-scan sonar / seabed survey of the lease area at a higher resolution by a specialist marine surveyor, informing the maritime archaeological and seabed-condition assessments.
- Assessments of Significance (Appendix RB1) under section 220ZZ of the *Fisheries Management Act 1994* for the additional FM Act–listed threatened species identified by DPIRD Fisheries — Grey Nurse Shark (*Carcharias taurus*), White Shark (*Carcharodon carcharias*), Southern Bluefin Tuna (*Thunnus maccoyii*), Black Rockcod (*Epinephelus daemelii*) and Australian Grayling (*Prototroctes maraena*) — in accordance with the NSW Threatened Species Assessment Guidelines.
- Social Impact Assessment Adequacy Report (Appendix RB4), mapping the project against the requirements of the NSW Social Impact Assessment Guideline for State Significant Projects, in response to the Department's request.
- Eden-1 Technical Testing and Development Report (Appendix RB5) consolidating the operational, environmental and cultivation findings of the multi-year Section 37 test program.
- Visual amenity and viewpoint assessment and images from the relevant publicly accessible vantage points — Disaster Bay Lookout, Green Cape, Merrica and north and south Greenglades Beach — each identifying the position of the existing test farm and the proposed AL21/004 lease area to enable direct comparison of distance and visibility (Section 5.13.1), supported by the existing in-water Section 37 test array as a representative real-world reference.
- Whale migration and resting/aggregation buffer assessment and mapping (Figure 30), in response to DPHI's request to identify whale migration paths and resting zones, drawing on whale-occurrence records, regional migration behaviour, site-specific observation since 2019, infrastructure design and operational controls (Sections 4.6 and 5.13.4).
- Staging framework and environmental performance indicators (Section 5.13.2).
- Kelp industry sector model, value-chain process flow and circular economy profile, end-use products (Figures 33, 34 and 35), in response to the Department's request, illustrating the inputs, outputs, by-products and recycling of residual materials from hatchery through to end sale, the

regional and ocean circular-economy value loops, and the delineation of the SSD-41680467 scope within the broader emerging kelp industry value chain (Section 5.13.14).

- Updated commercial fishing characterisation and estimated fishing-zone mapping (Figure 31), mapping the prawn trawl, nearshore gillnet, abalone and sea urchin dive, and gummy shark longline/trap fisheries against the AL21/004 lease to demonstrate the avoidance achieved through site selection, and documenting the DPIRD privacy-threshold and operator data constraints affecting the gummy shark fishery (Section 5.12.13).
- Aboriginal cultural heritage information, consolidating post-exhibition Aboriginal consultation and the Eden-1 Aboriginal cultural heritage material (Table 13 and 14), in support of the Heritage NSW (Aboriginal Cultural Heritage) response (Section 5.13.8).

Expanded biosecurity framework

- Dedicated, pathway-based Biosecurity Risk Assessment (Appendix RB2), adopting a precautionary pathway-based and uncertainty-informed framework, including a genetic-integrity assessment and consideration of vessel-related biosecurity pathways.
- Biosecurity Knowledge Gaps and Uncertainty Register (Appendix RB3) to document and manage residual uncertainty, as requested by DCCEEW.
- Updated and restructured the Biosecurity Plan (Appendix RC3) as a standalone document with expanded content addressing the farm and hatchery location, kelp diseases of biosecurity concern, hatchery water source and risk pathways, notifiable and prohibited matter under the *Biosecurity Act 2015*, marine pest detection in biofouling, genetic tools (e.g. Reef Adapt), defined operational modules, reporting arrangements (including the NSW DPIRD Biosecurity Emergency Animal Disease Hotline), and detailed management responses in place of earlier high-level commitments.

Management plan revisions

- Updated Marine Fauna Interaction Plan (Appendix RC1) to add deployment observer arrangements, explicit night-time operating procedures, large-whale entanglement response protocols, and a Marine Fauna Management Committee inclusive of cetacean expertise.
- Updated Emergency Response Plan (Appendix RC2) to recognise NPWS as a relevant authority for marine wildlife collision or interaction events.
- Updated Environmental Management Plan (Appendix RC4) to incorporate specific monitoring and reporting commitments for the relevant mitigation measures, including three-yearly third-party environmental audits (fish assemblages and benthic habitat) and annual reporting of significant *Ecklonia radiata* beach-cast deposits at Greenglades Beach related to farming operations.
- Updated Cultural Heritage Response Plan (Appendix RC5) to include new Unexpected Finds flowchart.

3.6 Continued Research and Ocean Testing

Throughout the post-exhibition period, Auskelp has continued the comprehensive ocean testing and research program within Disaster Bay under the existing Section 37 permit (FP25/88) issued by DPIRD Fisheries. This includes continued seeding, growing and monitoring of *Ecklonia radiata* on test longline infrastructure for the purposes of operational, environmental, cultivation and end-use research. Auskelp's research and development program is actively supported by the Marine Bioproducts Cooperative Research Centre (MBCRC).

4.0 RESPONSE TO SUBMISSIONS

Matters raised in public and organisational submissions received during the public exhibition period are responded in this section. Matters have been grouped into 22 thematic categories to assist clarity and to enable readers to draw a clear link between the issues raised in submissions and the response provided. Many submissions raised multiple issues; accordingly the number of issue references across this section exceeds the total number of submissions received.

Each category identifies the issue raised, provides Auskelp's response with reference to the evidence and analysis presented in the exhibited Environmental Impact Statement (EIS), describes any refinements or additional commitments arising from the matters raised, and cross-references the relevant EIS sections, technical appendices, mitigation measures and management plans.

A Submissions Response Matrix of all 241 public and organisational submissions (by category) is provided in Appendix RA1. The 22 Project Categories are detailed in Table 6 below. Numbers classified in support or in objection are based on the "description of the category".

Table 6 Project Categories

1.	The Project	12.	Coastal Erosion
2.	Procedural Matters	13.	Location
3.	EIS Adequacy	14.	Transport
4.	Wilderness & Coastal Character	15.	Navigation and Maritime Safety
5.	Biodiversity	16.	Commercial Fishing
6.	Whale Entanglement	17.	Recreational Fishing
7.	Water Quality	18.	Social and Economic
8.	Microplastics & Marine Debris	19.	Mental Health
9.	Algal Bloom	20.	Aboriginal Heritage
10.	Noise and Vibration	21.	European Heritage
11.	Visual Amenity	22.	Support Kelp Farming

4.1 The Project

Description of the category

This category captures matters raised at a project level — the nature of the development as commercial offshore aquaculture, the Proponent, the products to be produced, and general support for or opposition to the Project proceeding. The Project is the proposed development by Auskelp Pty Ltd to establish a 200-hectare offshore kelp aquaculture farm cultivating the native species *Ecklonia radiata* (Golden Kelp) within Aquaculture Lease AL21/004 in Disaster Bay, NSW, approximately 23 km southwest of Eden.

Number of submissions in support: 23 (16 Public, 7 Organisation).

Number of submissions in objection: 212 (208 Public, 4 Organisation).

Number of submissions providing comment: 6 (5 Public, 1 Public Authority).

Representative quotes — Support

"AusKelp Pty Ltd's proposal to establish the Eden 1 Kelp Aquaculture Farm in Disaster Bay … represents an important and positive step forward in sustainable marine industries in Australia offering environmental, educational, and economic benefits for the region." — Anna Cooke (Pambula, NSW)

"This isn't really a submission about a 200-hectare lease. It's about what kelp means for Australia in the decade ahead, and why this project is the right first move … Eden-1 on its own is small. As the first project of a domestic kelp industry, it matters strategically." — Sacha McMonagle-Ihasz (Richmond, Vic)

"The RCC actively supports the Auskelp proposal to establish a seaweed farm off the coast of Disaster Bay, creating an industry that will produce healthy food and other products ..., is good for the environment and will create jobs in this regional community." — Andrew Taylor, Regional Circularity Cooperative & Bega Circular Valley (Bega, NSW)

"This new Seaweed farm has major potential for both domestic and export markets ... This product would have serious economic value to the region and would bring in export dollars as well as regional employment. This is a win win for the region and the environment." — Ryan Morris, South Coast Sea Urchins Pty Ltd (Lilyfield, NSW)

"This project is valuable at a global, national and local level. Seaweed has an extraordinary ability to absorb carbon and excess nutrients, improve water quality, and support marine biodiversity." — Anthony Peacock (Mount Warrigal, NSW)

Representative quotes — Objection

"I am writing to formally object to the proposed 200-hectare industrial scale kelp farming development in Disaster Bay, near Wonboyn Lake. This proposal raises serious environmental, ecological, and community concerns." — Kerry Young (Endeavour Hills, Vic)

"Whilst aquaculture is of course an acceptable activity and could be supported in general, this is simply the wrong location for such a commercial-industrial use." — Nigel Bertram (Fitzroy, Vic)

"I object strongly to the proposed kelp farm at Disaster Bay ... My main objection is that this facility will fundamentally change the character of this remote, natural site." — Paul Whitington (Wonboyn, NSW)

"The proposed industrialisation of Disaster Bay is concerning because of its proposed size, location, environmental impact, the misleading nature of Aus Kelp's claims and precedent that it sets for the NSW coastline." — Stanys Saniga (St Kilda East, Vic)

"I object to the proposed development of a huge scale golden kelp aquaculture project in this pristine location." — Dr Toni Roberts (Hampton, Vic)

"How can the NSW Government even consider placing a 200ha industrial scale development in one of the last great pristine wilderness areas on the East Coast of Australia?" — Munlika Williamson (Wonboyn, NSW)

RESPONSE

The Proponent acknowledges the substantial level of public interest in the Project, including the 212 submissions received in objection, and respects the right of every person to participate in the exhibition process and to express concern about a proposal affecting the NSW coast. Many of these submissions raise informed concerns — relating to location, scale, environmental effects, visual character and precedent. Each substantive issue is identified and responded to on its merits within each of the 22 response categories detailed in Section 4 of this report.

For context, the Proponent respectfully draws attention to a targeted campaign made against the Project during the exhibition period called “Save Disaster Bay”. Objection-based material was repeatedly circulated through multiple Facebook community social-media channels, podcasts etc directing the public to an associated website (www.disasterbay.earth) to assist in making an objection. That material characterised the Project as an "industrialised monoculture" and set an explicit numerical objection target of 50 objections, to ensure Independent Planning Commission determination of the Project. A typical social media post and analysis can be found in Appendix RD2 (Save Disaster Bay Analysis 2026).

Whilst the Proponent fully respects the rights of objectors to mobilise as they wish, the objection campaign utilised consistent misinformation in their campaign against the Project.

As is best practice, the Proponent and its staff did not engage with or respond to social media commentary, online debate, or attempt to correct online inaccuracies during the exhibition period. Nor did the Proponent (at any time) seek to solicit responses specifically in support of the project.

The geographic distribution of submissions was most notably from people who live more than 100 km from the Project location. Of the 241 public submissions received, 44 (18.3%) originated from within 5 km of the Project – Wonboyn area, 42 (17.4%) from between >5 km to 100km away, and 155 (64.3%) originated from more than 100 km away. See Figure 3, below:

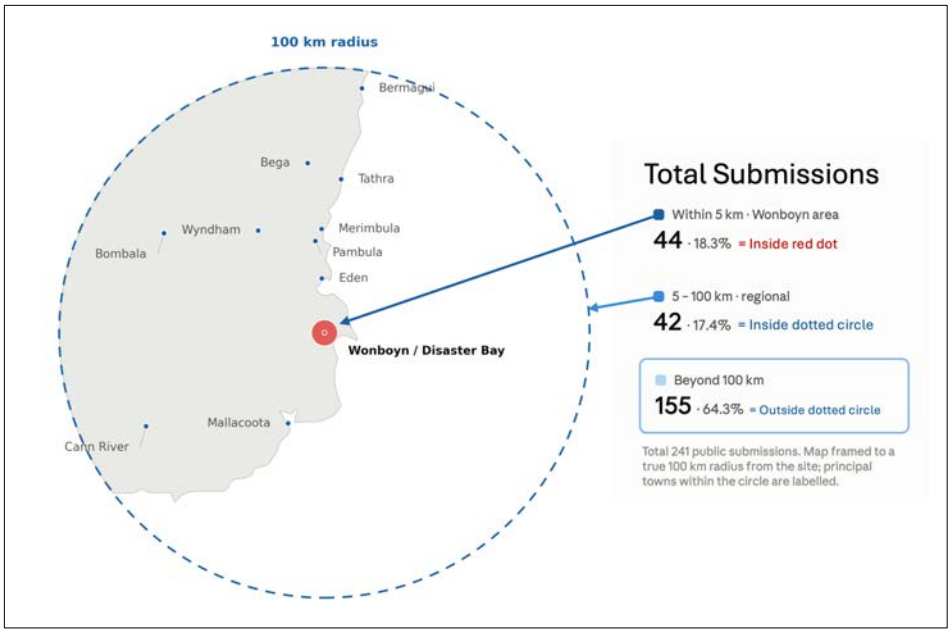

Figure 3 Geographic origin of public submissions relative to the Eden-1 project site, Disaster Bay (Credit Auskelp 2026)

The Proponent makes these observations not to diminish the sincerity of individual submitters, but because they are directly relevant to the weight that should be afforded to the volume of submissions. Under the NSW planning system, development proposals are determined on their planning merits and the substance of the issues raised, rather than by the simple number of submissions for or against a proposal. Despite the majority of objections originating from >100 km from the project (65.6% of objections), all responses have been treated equally. That said, the Proponent respectfully requests that submissions be evaluated on the relevance, evidence and planning merit of those issues, rather than on submission numbers alone.

Project definition

A number of submissions characterise the Project as "industrial", "industrial scale" or as "industrial-commercial" development inconsistent with the character of Disaster Bay. The Project is properly characterised as aquaculture, not industrial development. The Project comprises the construction, operation, maintenance (and eventual decommissioning) of a 200-hectare offshore kelp aquaculture development within Aquaculture Lease AL21/004 cultivating the native brown kelp *Ecklonia radiata* (EIS Section 4.1). The development is a non-intensive aquaculture operation: it involves no addition of feed, fertiliser, pesticides, antibiotics, hormones, veterinary inputs or chemicals to the marine environment, and no waste, no emissions from production, no dredging or seabed excavation (EIS Sections 4.1 and 4.8). The Project is being assessed as State Significant Development under the *Environmental Planning and Assessment Act 1979* and *State Environmental Planning Policy (Planning Systems) 2021*, the statutory framework that applies to all aquaculture proposals of this nature in NSW within offshore coastal waters.

The Project uses standard longline infrastructure of a type widely deployed globally for aquaculture cultivation (and specifically detailed in the NSW Government Marine Waters Sustainable Aquaculture Strategy), which is the same infrastructure already in use within Twofold Bay and Jervis Bay for mussel aquaculture (EIS Section 1.2). The infrastructure consists of helical screw anchors, marine-grade backbone and dropper lines, buoyancy floats, and lease boundary markers (EIS Section 4.1). Within the 200-hectare lease, active longline infrastructure is expected to occupy up to approximately 100 hectares, with the remainder retained for operational vessel access, hydrodynamic spacing, navigation safety and open-water corridors (EIS Section 4.1). The longlines are tensioned and fixed-position to minimise slack-line risks and improve stability in exposed sea states (EIS Section 4.1).

The Project will be located approximately 1.1 km offshore at the nearest point, with longlines deployed in waters generally 20–25 m depth over unconsolidated sandy sediments, and the layout positioned to avoid mapped reef and sensitive habitats (EIS Section 4.1). Detailed assessments of the site, lease boundaries, infrastructure design, cultivation methods, harvesting, transportation and decommissioning are provided at EIS Sections 4.5 through 4.15.

The Project will cultivate the native species *Ecklonia radiata* (Golden Kelp), which occurs locally in Disaster Bay and surrounding bays on subtidal rocky reefs at depths of 5–25 m, particularly along the rocky margins near Green Cape and the southern margins of the bay (EIS Section 4.8). Seedstock is sourced exclusively from specimens gathered within 10 km of Disaster Bay to reduce genetic risks (EIS Section 1.2). The kelp biomass produced will be used for human food products, livestock feed, liquid and solid fertilisers, bioplastics and nutraceutical extracts (EIS Section 1.2). The Project is anticipated to produce more than 1,500 tonnes of wet seaweed annually, with a value greater than $9 million, and to employ more than 30 full-time staff during operations across marine operations, processing, end use product development, logistics, hatchery management, administration and scientific roles (EIS Section 1.2).

Auskelp Pty Ltd is a wholly Australian-owned and operated company, led by a local fifth-generation Wonboyn family. The company was established in 2019 to farm seaweed with the objective of delivering high-quality environmentally-friendly seaweed products (in line with multiple published NSW government objectives, see Figure 4, below), and importantly seeks to create much needed jobs in far south coast NSW (EIS Section 1.1). Auskelp has conducted hatchery and open ocean testing of locally sourced *Ecklonia radiata* in Twofold Bay and Disaster Bay – on approved leases in Twofold Bay, and under section 37 permits issued by DPIRD Fisheries for Disaster Bay – and the test program is arguably the most comprehensive offshore *Ecklonia radiata* cultivation program globally (EIS Section 1.1 and Section 1.2). Auskelp is a founding member of the Australian Sustainable Seaweed Alliance and a core partner of the Marine Bioproducts Cooperative Research Centre (EIS Section 1.1).

Figure 4: NSW, Bega Valley Shire and Commonwealth plans, strategies and documents that support the development of aquaculture and seaweed farming in NSW waters.

In addition to the substantial government programs actively supporting the development of kelp farming in NSW waters (some listed in Figure 4 above), the Project directly aligns with the NSW Aquaculture Vision Statement (goal to double NSW annual aquaculture farm-gate production to $300 million by 2030, as well as the de-risking of investment in aquaculture), the NSW Seaweed Prospectus (global market opportunity for New South Wales seaweed is estimated to be worth between A$900 million and A$2.3 billion by 2030), the NSW Marine Waters Sustainable Aquaculture Strategy (MWSAS) which lists the specific longline infrastructure proposed for the Eden-1 Project, and the broader NSW Blue Economy framework for the south coast (see also EIS Sections 3.1 and 3.2). DPIRD Fisheries has confirmed that the proposed directly aligns with these strategic policy settings and that the proposed Project meets the MWSAS objectives, and avoids the MWAS constraints criteria. The Proponent has invested in multiple years of research, prototype development,

environmental studies (offshore testing, coastal processes, benthic and technical studies, and underwater mapping and cultural heritage), and has conducted ongoing and comprehensive stakeholder consultation.

DPIRD Agriculture has confirmed that the Project does not impact agricultural land, resources, services or facilities, and that no further comment was required. DPIRD Food Authority (Biosecurity) has confirmed that the site is a suitable choice for seaweed culture for human consumption, given the remote nature of the site is likely to produce a product with low levels of contaminants. Bega Valley Shire Council confirmed it has no further issues with the proposed development.

Submissions in support of the Project highlighted the strategic opportunity to establish a new sustainable marine industry within NSW, contributes to regional employment and economic diversification, uses native species without chemical or feed inputs, aligns with the NSW Government aquaculture and seaweed industry policies and objectives, and the Project contributes to scientific research and skills development on the South Coast. Auskelp acknowledges the strong endorsement of the Project from key regional industry, research and community stakeholders.

Auskelp acknowledges the concerns expressed by submitters in objection to the Project, including those relating to the scale, the location, whales, microplastics and other environmental factors, and the precedent the Project may set for future development. Detailed responses to specific matters within those broader concerns are addressed in the following categories of this Section 4.

It should also be noted that no pathway currently exists in NSW to obtain an offshore farm lease area for seaweed, regardless of project size, without proceeding through a State Significant Development process.

Assessment Outcome

The submissions received demonstrate a high level of public interest in the Project and have identified a broad range of issues relating to the proposed location, scale, environmental impacts, visual amenity, precedent and the future development of offshore aquaculture in NSW. These matters have been considered in detail throughout this Submissions Response Report and assessed on their individual planning and technical merits.

The Eden-1 Project is appropriately characterised as an offshore marine aquaculture development rather than industrial development. The proposal utilises standard submerged longline aquaculture infrastructure that is expressly contemplated within the NSW Government Marine Waters Sustainable Aquaculture Strategy and is consistent with established aquaculture practices already operating in NSW and internationally. The Project also aligns with multiple Commonwealth, State and regional strategic policies that identify sustainable seaweed aquaculture as an emerging priority industry for New South Wales.

The assessment further confirms that the proposal has been developed through more than four years of research, ocean testing, environmental investigations and stakeholder engagement, supported by specialist technical studies and agency consultation. Agency advice received during the assessment has not identified any fundamental inconsistency between the Project and the applicable strategic planning or aquaculture policy framework. Matters requiring clarification or additional information have been addressed through this Submissions Response Report.

The Proponent therefore considers that the Project remains consistent with the strategic objectives for sustainable marine aquaculture in NSW and that the matters raised in submissions do not alter the fundamental planning merits of the proposal. The detailed assessment of specific environmental, social, technical and operational issues is provided in the corresponding sections of this report, where each matter has been considered on its own evidence and planning merit.

4.2 Procedural Matters

Description of the category

This category captures matters raised in submissions regarding the procedural framework applicable to the assessment of the Project, including compliance with the Secretary's Environmental Assessment Requirements (SEARs), application of the Biodiversity Development Assessment Report (BDAR) waiver, accuracy of statutory references within the EIS, the adequacy and reach of community and stakeholder

consultation undertaken prior to exhibition, the adequacy of Aboriginal community and Registered Aboriginal Party (RAP) consultation, and procedural calls for further review (including calls for Independent Planning Commission (IPC) review and public inquiry).

Number of submissions in support: 2 (2 Public).

Number of submissions in objection: 51 (48 Public, 3 Organisation).

Number of submissions providing comment: 1 submissions (1 Public).

Representative quotes — Support

"Between scoping and the final EIS, the farm moved further offshore and vessel access moved out of Wonboyn. These were visible responses to what the community asked for. Whatever shape this project takes in approval will shape every kelp proposal that follows it. That's worth getting right." — Sacha McMonagle-Ihasz (Richmond, Vic)

"AusKelp has done the work to ensure valid ESG credentials … AusKelp has done the hard work to establish an industry venture and is a global leader in cultivation of Golden Kelp." — Marcus Jowsey (Pambula, NSW)

Representative quotes — Objection

"The EIS lists extensive consultation with many stakeholders, yet for most locals the first they knew about the proposal was when some yellow buoys appeared off the south Wonboyn beach which identified a test site. It must be remembered that a lot of this "consultation" was just after the 2020 bushfires and during COVID." — Ian Williamson (Wonboyn, NSW)

"If it is relocated I sincerely hope that more genuine community consultation occurs as this has been severely neglected in this case, reduced to a mere box ticking exercise, with very few local individuals involved." — Dr Toni Roberts (Hampton, Vic)

"Although I understand that planning has been going on for many years I was not made aware of any public consultation or dissemination of information until about six months ago." — Paul Hellyer (St Kilda East, Vic)

"Insufficient Community Consultation: Local residents have expressed that there has been inadequate widespread consultation regarding the full scale and potential repercussions of this project on the community." — Adam Chorvat (Cooma, NSW)

"A public enquiry must be held at the highest levels and the Minister held to account." — Dan Harmelin (Jaspers Brush, NSW)

RESPONSE

SEARs compliance and EIS preparation

The EIS has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the NSW Department of Planning, Housing and Infrastructure (DPHI), and the *State Significant Development Guidelines – Preparing an Environmental Impact Statement*. A SEARs cross-reference table demonstrating that each requirement has been addressed within the EIS is provided at Section 12 of the exhibited EIS (EIS Section 1.8). The EIS has been prepared by a Registered Environmental Assessment Practitioner (REAP) with input from specialist sub-consultants including Biosis (Aboriginal cultural heritage), Elgin Associates (benthic ecology, BRUV, water quality) and other specialist contributors identified in the EIS. The supporting technical assessments draw on more than five years of site-specific ocean testing and research undertaken by Auskelp within Twofold Bay and Disaster Bay (EIS Section 1.1).

BDAR waiver

The Conservation Planning and Assessment (CPA) branch of the NSW Department of Climate Change, Energy, the Environment and Water has confirmed that the EIS is consistent with the Biodiversity Development Assessment Report (BDAR) waiver provisions signed by the delegate on 19 November 2025, and that no further comment on terrestrial biodiversity values or application of the Biodiversity Assessment Method is required. This addresses the procedural pathway for biodiversity assessment under the SEARs.

Statutory references

DPIRD Fisheries raised two procedural referencing matters. First, that future documentation reference the Department of Primary Industries and Regional Development (DPIRD) correctly, except in citations of documents published by the previous Department of Primary Industries (DPI). Auskelp has reviewed the EIS and supporting documentation and will update references throughout post-exhibition documentation, preserving original references in citations of documents published under the previous DPI. Second, that the *Coastal Protection Act 1979* has been repealed. Auskelp confirms that references to the repealed Act will be removed and coastal management matters will be considered against the current *Coastal Management Act 2016* and associated frameworks.

Community and stakeholder consultation

The community and stakeholder engagement process for the Project commenced in December 2020 and has continued through to, and including, the public exhibition period (EIS Section 6.1). Between March 2023 and August 2024, engagement activities were informed by the Business and Community Engagement Framework developed through the Blue Economy Cooperative Research Centre (BECRC) and independently administered by the University of Wollongong. Engagement has subsequently continued in accordance with the requirements of the Secretary's Environmental Assessment Requirements (SEARs).

The engagement program has included:

- discussions with Wonboyn and Eden residents, oyster farmers and the Wonboyn Lake Ratepayers' Association from March 2021;
- ongoing briefings to the Bega Valley Shire Mayor (from December 2021) and to the Federal Member for Eden Monaro (from August 2022);
- 302 community survey participants across the Bega Valley region between June and September 2023;
- a Community Information Session in Eden (49 attendees) and a drop-in session in Wonboyn (10 attendees) on 15 September 2023;
- targeted introductions and meetings with maritime operators, aquaculture industry participants, recreational fishers and educators between June 2023 and March 2026;
- a Wonboyn Community Session held at the Wonboyn Fire Shed 22 October 2025 (approximately 65 in-person attendees and 57 online groups), with the full and unedited video available at www.auskelp.net;
- a Wonboyn Ratepayers' Association meeting in January 2026 (approximately 35 attendees) at which the EIS process and timing were presented along with independently provided detailed options for opposing the Project;
- maintenance of an Interested Parties database of 503 (subsequently 536) recipients including all known Wonboyn residents, RAPs, government departments, councillors, industry participants and known opponents of the Project, who have received Annual Reports, FAQs (FAQ-1 August 2025, FAQ-2 November 2025), Information Session invitations and exhibition notifications; and
- supporting notification through local news, ABC South Coast Radio interviews, WIN News coverage, online platforms, physical notices in Wonboyn, the Eden Chamber of Commerce notice board, the Wonboyn Ratepayers' Association and the local Rural Fire Service (EIS Section 6.1).

Auskelp acknowledges that some submitters indicated they did not become aware of the Project until the offshore test site was visible, or until the exhibition period. The Project's consultation program has been progressive and additive — beginning at a small scale during the early ocean-testing phase and broadening over time as the proposal matured, in line with the BECRC stakeholder engagement framework. Auskelp does not consider that the engagement program constitutes "box-ticking", and notes that the engagement record demonstrates substantive responsiveness — including the relocation of the lease further offshore in response to community feedback during scoping, and the withdrawal of the originally proposed commercial

vehicular access route through Nadgee Nature Reserve following early engagement with NSW NPWS (EIS Section 9.2 and Section 9.3.2). These changes are acknowledged in supportive submissions as visible responses to community input.

Aboriginal and RAP consultation

Aboriginal community and Registered Aboriginal Party (RAP) consultation for the Project was undertaken by Biosis on behalf of the Proponent in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010), and is documented in the Aboriginal Cultural Heritage Assessment Report (ACHAR) at Appendix A5 of the exhibited EIS. RAP consultation included engagement with the Eden Local Aboriginal Land Council, Eden Aboriginal Corporation, Bega Local Aboriginal Land Council, NSW Aboriginal Land Council, Katungal Aboriginal Corporation and other individual First Nations representatives and groups (EIS Section 6.4). These groups continue to be engaged through correspondence, online meetings and ongoing report distribution. The consultation record and full Aboriginal Cultural Heritage Assessment documentation form Appendix A5 of the EIS, with the supporting consultation documentation (Appendices A to E of the ACHAR) now provided to Heritage NSW (Aboriginal Cultural Heritage) in response to that agency's request (refer Section 4.20) .

Auskelp remains committed to continuing engagement with all listed RAPs and the broader Aboriginal community. Substantive matters relating to Aboriginal heritage values are addressed at Section 4.20 of this report, as well in Section 5.13.8 where DPHI requested specific details of communications with RAPs and Eden LALC.

Public exhibition and IPC determination

The EIS was placed on public exhibition by DPHI between 10 April 2026 and 8 May 2026, a 28-day period consistent with Schedule 1 section 9 of the *Environmental Planning and Assessment Act 1979* and the Department's Community Participation Plan. The exhibition documentation, agency advice, submissions, and this Submissions Response Report are publicly available via the NSW Government Major Projects Portal. Following completion of the exhibition period, DPHI confirmed that the number of unique public objections to the Project exceeded the threshold prescribed under section 2.7 of *State Environmental Planning Policy (Planning Systems) 2021*, and accordingly the consent authority for the Project will likely be the Independent Planning Commission (IPC).

Submissions calling for IPC review of the consultation process (and the assessment as a whole) are therefore addressed through the standard SSD pathway. It is expected, the IPC will consider the exhibited EIS, the agency advice received, the submissions made during exhibition, this Submissions Response Report, the Department's Assessment Report and any further information requested before making a determination on the Project. The IPC may conduct public meetings, hearings or briefings as part of its determination process. Submissions calling for a "public inquiry" or for the matter to be reviewed at the highest level are accordingly addressed through the IPC determination pathway under the SSD framework.

Project documentation

Project documentation made publicly available throughout the EIS preparation and exhibition period has included the exhibited EIS and supporting specialist assessments, Auskelp's Annual Reports (FY22 through FY25), Frequently Asked Questions (FAQ-1 and FAQ-2), and the recorded video of the 22 October 2025 Wonboyn Community Session (EIS Section 6.2) and via the Auskelp website. The EIS and supporting documents are also publicly available through the NSW Government Major Projects Portal.

Proponent Statement

Auskelp acknowledges that the process from project inception to public exhibition has spanned more than six years — a duration neither anticipated nor, frankly, conceivable to the Proponent at the outset in 2019. What began as a proposal to explore kelp farming in NSW waters (driven by a desire to create a new offshore kelp industry that was good for the environment and provided jobs in an area with few employment prospects) has evolved into one of the most thoroughly researched, tested, consulted-upon and documented aquaculture proposals ever advanced in NSW. Over that period, Auskelp has navigated successive iterations of the regulatory pathway, undertaken multiple seasons of ocean testing under section

37 permits, commissioned independent specialist studies across coastal processes, benthic ecology, water quality, Aboriginal cultural heritage, biosecurity and marine fauna, and constantly refined the proposal in response to feedback received.

Throughout that long journey, every effort has been made to provide absolute clarity to the Wonboyn community, the broader Bega Valley, Traditional Owners, government agencies and the public — through annual reports published every year since FY22, Frequently Asked Questions documents, a permanent project website, in-person community sessions, livestreamed and fully recorded information sessions, distribution to an Interested Parties database that has grown to over 500 recipients including all known Wonboyn residents, regular briefings to elected representatives and Bega Valley Shire Council, ABC South Coast Radio, and WIN News coverage, and direct correspondence with every individual or group that has asked to engage.

Auskelp has, throughout, sought to ensure that information about the Project is available, accessible, current and honest — recognising that a development of this type, scale and location warrants a level of transparency that goes well beyond the minimum statutory requirements. The Proponent is a current Bega Valley business owner with fifth-generation ties to Wonboyn, and the consultation effort reflects a commitment not only to regulatory compliance but to the community in which they form part.

Assessment Outcome

The matters raised regarding the adequacy of the Environmental Impact Statement, statutory process and community consultation have been reviewed as part of this Submissions Response Report. The assessment confirms that the Project has followed the prescribed State Significant Development assessment pathway and that the Environmental Impact Statement was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs), the State Significant Development Guidelines, and the Registered Environmental Assessment Practitioner (REAP) Scheme.

The biodiversity assessment pathway has been confirmed by the NSW Department of Climate Change, Energy, the Environment and Water through the approved Biodiversity Development Assessment Report (BDAR) waiver, while procedural matters raised by DPIRD Fisheries relating to departmental nomenclature and legislative references will be corrected in post-exhibition documentation. These matters are administrative in nature and do not affect the environmental assessment or conclusions of the EIS.

The assessment also confirms that the Project has been subject to an extensive and progressive consultation program extending over more than six years, incorporating engagement with government agencies, Registered Aboriginal Parties, Traditional Owners, local residents, community organisations, industry stakeholders, commercial operators and the broader public. The consultation process has exceeded the minimum statutory exhibition requirements and resulted in tangible refinements to the Project. The exhibition process has provided a further opportunity for agencies and the public to scrutinise the Project, with all submissions considered and responded to through this Submissions Response Report.

The Proponent is satisfied that the statutory assessment, consultation and exhibition requirements applicable to the Project have been appropriately met. No matters raised in submissions identify any procedural deficiency that materially affects the validity, completeness or adequacy of the Environmental Impact Statement or the integrity of the State Significant Development assessment process.

4.3 EIS Adequacy

Description of the category

This category captures matters raised in submissions regarding the adequacy of the exhibited Environmental Impact Statement and the supporting technical assessments. Issues raised include perceived gaps in baseline data (in particular the seasonal coverage of the benthic survey), the use of a small ocean test site as the evidence base for a 200-hectare lease, the framing and tone of statements within the EIS (described variously as "one-sided", "misleading", or "promotional"), the representation of scientific literature within the EIS, the assessment of risk levels as predominantly "low" or "negligible" for a first-of-kind project, the absence (in some submissions' view) of independent review, and the level of detail provided on cumulative and long-term impacts.

Number of submissions in support: 6 (4 Public, 2 Organisation).

Number of submissions in objection: 86 (83 Public, 3 Organisation).

Number of submissions providing comment: 2 (1 Public, 1 Public Authority).

Representative quotes — Support

"AusKelp has done the work to ensure valid ESG credentials and kelp farming brings so much benefit to the region … AusKelp has done the hard work to establish an industry venture and is a global leader in cultivation of Golden Kelp." — Marcus Jowsey (Pambula, NSW)

"Auskelp is an excellent example of such a business and should be supported in its innovative and ground-breaking approach." — Andrew Taylor, Regional Circularity Cooperative & Bega Circular Valley (Bega, NSW)

Representative quotes — Objection

"I have read the EIS for the proposed kelp farm in Disaster Bay. Having been involved in such initiatives for many years I wanted to keep an open mind. Considering the importance of this proposal, I am surprised at how little it gets to the real issues. It talks a lot about the benefits of kelp, which are valid, but describes Disaster Bay as a backwater that is not used and treasured locally … I read all the risk analyses and was concerned. Most said the impacts on all the identified risks as LOW or NEGLIGIBLE. On the other hand I would rate most of the impacts MODERATE to HIGH, or HIGH to EXTREME." — Ian Williamson, Wonboyn (Wonboyn, NSW)

"While there are many issues I have with the EIS which I find very one sided …" — Munlika Williamson, Environmental Engineer (Wonboyn, NSW)

"AusKelp's benthic snapshot, a single survey during winter, revealed communities of organisms (74 fauna and two algae) inhabiting the unpolluted waters and sea floor of the site … AusKelp's Benthic assessment admits that a valid assessment of infauna composition would be based on multiple replica samples collected from various sites over summer as well as winter seasons to capture natural variation." — Jane Skelton (Faulconbridge, NSW)

"I am concerned that these documents employ numerous statements that are misleading, demonstrably untrue, scientifically baseless, or constitute errors of omission, to justify this project … As the first industrial-scale kelp farm in Australia, risk assessment rests on speculation, extrapolating from other, small-scale aquaculture (e.g. mussel farms). Mitigation strategies are untested and of unproven efficacy in Disaster Bay." — Dr Virginia Shepherd, PhD aquatic biology (Faulconbridge, NSW)

"The project's EIS report claims low risk due to using “locally sourced seed stock”, but the golden kelp (species) is not naturally occurring in this location, which has a sandy sea floor, so this statement is misleading." — Dr Toni Roberts (Hampton, Vic)

"Constructing a kelp farm in a high value habitat area requires careful audited research and assessment prior to any action. Allowing such a project to go through without a thorough analysis by an outside group with no vested interests in the project is essential." — Alex Felson, Elisabeth Murdoch Chair of Landscape Architecture, University of Melbourne; PhD Ecology and Evolution (Kew, Vic)

"I believe there is still insufficient long-term research into the cumulative impacts of kelp farming in this specific area. Decisions of this scale should be made with a precautionary approach, ensuring that the environmental integrity and community values of the region are protected." — Ciara Maher (Eden, NSW)

RESPONSE

<u>Preparation, authorship and statutory framework</u>

The Environmental Impact Statement has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by DPHI and the State Significant Development Guidelines – Preparing an Environmental Impact Statement. The EIS has been prepared and certified by a Registered Environmental Assessment Practitioner (REAP) in accordance with the Registered Environmental Assessment Practitioner Scheme, with the REAP Declaration provided at the front of the exhibited document (EIS, REAP

Declaration). The EIS has been peer-reviewed within the REAP-certified review process and is supported by independent specialist sub-consultants for each technical discipline. A SEARs cross-reference table demonstrating that each SEARs requirement has been addressed within the EIS (EIS Section 12, Table 20).

The Proponent welcomes scrutiny of the EIS by the public and government Agencies and specifically addresses the following distinct contentions in response:

1. Generalised assertion of error. Various objections claim that the EIS contains numerous statements that are misleading, untrue, scientifically baseless, or constitute errors of omission. The Proponent and their scientific team takes strong exception to these assertions. Even so, every effort has been made to address these broad statements (where they can be addressed) in this SRR on an item-by-item basis. The Proponent stands by the evidentiary basis of the EIS and the published risk ratings backed up in this SRR.

2. Contention that risk assessment for Disaster Bay rest on speculation. Longline kelp cultivation is among the largest and longest-established aquaculture activities in the world. Global seaweed mariculture rose from 10.6 million tonnes in 2000 to around 34.7 million tonnes in 2024, and the kelps *Laminaria* and *Saccharina* (not found in Australian waters but of the same laminarian family, and breeding process) account for roughly 35% of global cultivation, reflecting decades of commercial operation across Asia, Europe and North America. The environmental interactions of suspended kelp culture — hydrodynamics, benthic effects, light, entanglement, genetic interaction with wild stands — are accordingly the subject of a substantial and mature international literature. Where site-specific data does not exist, the EIS adopted Australian approved risk frameworks (Fletcher et al., 2004; revised 2020) and applied them to analogous and well-studied aquaculture systems. This is the orthodox and accepted method of environmental risk assessment, and is precisely what a precautionary approach requires. Critically, the many of the risk ratings are drawn upon suspended mussel culture aquaculture, which is recognised in the literature as significantly higher-impact than kelp longline. Mussel culture generates biodeposits and pseudofaeces, reaches reproductive maturity before harvest, spat is often sourced from remote locations, and mussel farming utilises looped lines which can create an entanglement risk. Kelp longline adds no feed, no nutrients, no chemicals and no freshwater, is purely nutrient-extractive, seedstock is sourced locally, and farmed kelp does not quickly reach reproductive maturity. As such, adapting a higher-impact framework to a lower-impact activity does not understate risk and the likely effects.

<u>Evidence base, ocean testing and specialist studies</u>

The EIS draws on multiple years of NSW-specific research and ocean testing undertaken within Twofold Bay and Disaster Bay on existing *Ecklonia radiata* leases or under section 37 permits issued by DPIRD Fisheries (EIS Section 1.1 and Section 1.2). The EIS is supported by independent site-specific specialist studies including:

- a seabed assessment of the proposed lease area undertaken by Elgin Associates (2025), including side-scan sonar surveys, underwater drone video transects, Baited Remote Underwater Video (BRUV), sediment sampling and benthic biota characterisation (EIS Section 7.9 and Appendix A9);
- oceanographic data drawn from the Manly Hydraulics Eden Waverider Buoy spanning 1978 to 2024;
- a targeted search of the NSW BioNet Atlas, NSW DPI Threatened and Protected Species Listings, AHIMS, EPBC Protected Matters Search, and other regulatory databases (EIS Sections 7.10, 7.11);
- the Coastal Processes and Geomorphology assessment, Marine Fauna Interaction Plan, Emergency Response Plan, Biosecurity Plan, and Environmental Management Plan (EIS Appendices B1, B3 and supporting documents); and
- ongoing kelp cultivation, survival and resilience data from test infrastructure (EIS Section 1.1).

<u>"Marine desert" framing and species occurrence</u>

Several submissions characterise the EIS as describing the proposed site as a "marine desert", "ocean desert" or as "lifeless". The EIS does not use those terms. The EIS describes the benthic environment within the proposed lease as "unconsolidated fine sediments" that "lacks reef structures or other sensitive benthic habitat features, including seagrass, corals, rocky substrates, kelp assemblages, or sponge gardens" with "low abundance and diversity of demersal fish and benthic fauna such as starfish, consistent with a mobile,

low-complexity sandy seabed" (EIS Section 7.9). This is a technical characterisation supported by the Elgin Associates seabed assessment and is distinct from any colloquial description used during community engagement. Auskelp recognises that the term "marine desert" used during early community discussions may have been heard by some attendees as implying lifelessness, which was not the intent.

In relation to the assertion that *Ecklonia radiata* does not naturally occur at the site, the EIS records that *Ecklonia radiata* occurs locally in Disaster Bay on subtidal rocky reefs at depths of 5–25 m, including near Green Cape and the rocky margins south of Disaster Bay (EIS Section 4.8). The species is native to the region. The cultivation longlines suspend kelp in the upper water column from buoyancy floats — the technique uses the native species in a cultivated configuration, similar to the way kelp species in the family Lessoniaceae (such as *Saccharina latissima* and *Macrocystis pyrifera*) are farmed internationally (EIS Section 4.8). Seedstock is sourced exclusively from specimens gathered within 10 km of Disaster Bay to eliminate biosecurity and genetic risks (EIS Section 1.2).

Risk ratings

The risk assessment methodology adopted for the Eden-1 Project is based on the National Ecologically Sustainable Development (ESD) Reporting Framework for Fisheries and Aquaculture (Fletcher et al., 2004; revised 2020), a nationally recognised environmental risk-assessment framework widely applied throughout Australian fisheries, aquaculture and marine-resource management. The framework assesses risk as a function of likelihood and consequence, with consequence measured at the scale of the stock, ecosystem or community rather than the outcome for an individual organism or isolated event. The methodology provides a transparent, repeatable and evidence-based process for evaluating environmental, social and operational risks and forms the basis of the risk evaluation presented throughout the EIS.

The EIS includes a comprehensive suite of Risk Tables (Risk Tables 1–24) addressing construction, operation, infrastructure, navigation, biodiversity, biosecurity, marine fauna interactions, social, cultural, economic and decommissioning risks. Each assessment identifies the relevant hazard, the inherent risk rating, proposed mitigation and management measures, the residual risk rating following implementation of those measures, and the party responsible for implementation and oversight.

Risk ratings are derived using the standard likelihood and consequence framework set out in EIS Sections 8.3 (Likelihood Levels), 8.4 (Consequence Levels) and 8.5 (Risk Matrix). Likelihood is assessed on a six-point scale ranging from Remote (1) to Likely (6), while consequence is assessed on a six-point scale ranging from Negligible (0) to Catastrophic (5). Consequence ratings are calibrated against measurable effects at the stock, ecosystem or community scale, including specific criteria relating to protected species, habitat condition, ecosystem function, community values and operational performance. The framework also incorporates prescribed management-response thresholds, whereby Moderate, High and Extreme risks require increasing levels of intervention, management planning and corrective action.

This approach is established practice within Australian fisheries and aquaculture environmental assessment and ensures that risk ratings are derived from the objective magnitude and likelihood of a potential impact, rather than subjective perceptions of risk or the seriousness of a hypothetical individual event. Accordingly, the framework distinguishes between an event that may be significant for an individual organism or infrastructure component and an event that would result in a measurable impact at the stock, ecosystem or community level.

Auskelp notes that several submissions questioned why the majority of residual risk ratings are assessed as Low or Negligible. Under the adopted framework, a Negligible consequence reflects impacts that are not measurable above natural background variability, while a Minor consequence reflects impacts that may be detectable but are minimal and do not materially affect stock, ecosystem or community function. The residual ratings therefore reflect the application of mitigation measures, the physical characteristics of the lease location, the design and operating characteristics of the proposed cultivation system, the implementation of Project-specific management plans, and the evidence available from comparable aquaculture operations in New South Wales and internationally. The ratings are therefore a consequence of applying the adopted ESD framework to the available evidence, rather than a subjective assessment of the desirability or acceptability of the Project.

Likelihood Levels

Likelihood level	Descriptor
Remote (1)	Never heard of, but not impossible
Rare (2)	May occur in exceptional circumstances
Unlikely (3)	Uncommon
Possible (4)	Some evidence to suggest this is possible
Occasional (5)	May occur
Likely (6)	Is likely to occur

Table 7 Likelihood levels of risk for the evaluation of Kelp Aquaculture Farming in Disaster Bay.

Consequence Levels

Level	Standard Consequence Levels	Impact on Protected Species
Negligible (0)	Insignificant impacts. Impacts unlikely to be measurable at the scale of the stock, ecosystem, or community level against background variability.	Almost none are impacted.
Minor (1)	Possibly detectable but minimal impact on structure, function or dynamics.	Some are impacted but there is no impact on stock.
Moderate (2)	Maximum appropriate/acceptable level of impact (e.g. full assimilation rate for nutrients).	Levels of impact are at the maximum acceptable level.
Severe (3)	Wider, longer-term impacts (detectable at the stock, ecosystem or community level).	
Major (4)	Serious impacts that require a relatively long timeframe to restore to an acceptable level.	
Catastrophic (5)	Widespread and permanent irreversible damage or loss – possibility that the problem cannot be fixed (e.g. extinction).	

Table 8 Consequence levels of risk for the evaluation of Kelp Aquaculture Farming.

- **Risk Matrix Adopted**

		Consequence					
Likelihood		Negligible 0	Minor 1	Moderate 2	Severe 3	Major 4	Catastrophic 5
Remote	1	0	1	2	3	4	5
Rare	2	0	2	4	6	8	10
Unlikely	3	0	3	6	9	12	15
Possible	4	0	4	8	12	16	20
Occasional	5	0	5	10	15	20	25
Likely	6	0	6	12	18	24	30

Table 9 Risk Matrix Table used for the evaluation of Kelp Aquaculture Farming.

Cumulative and long-term impacts

A cumulative impact assessment is provided at EIS Section 1.5, prepared in accordance with the NSW Department of Planning, Industry and Environment's *Cumulative Impact Assessment Guideline*. The assessment considers the Project alongside other existing, approved and reasonably foreseeable activities, including commercial and recreational boating, fishing, existing aquaculture leases, port and marina operations, tourism vessels and marine research activities. The 200-hectare spatial footprint represents less than 5% of the broader marine estate of Disaster Bay, is comparable in scale to the existing 47 ha of oyster leases in Wonboyn Lake and the 49.5 ha and 70 ha of mussel farms operating in Twofold Bay and Jervis Bay respectively, and is small relative to the 3,189 ha of oyster farms operating in NSW lakes and estuaries (EIS Section 1.5).

Auskelp acknowledges the concern that long-term cumulative impacts of offshore kelp aquaculture remain an emerging area of research, with limited published data on operations in Australian waters. The Environmental Management Plan incorporates an adaptive management framework with seasonal monitoring, third-party environmental audits every three years covering fish assemblages and benthic habitat (Mitigation Measures CE3 RE1 and RE3), and annual reporting of beach-cast deposits of *Ecklonia radiata* on Greenglades Beach related to farming operations (Mitigation Measure BI1). These commitments support ongoing data collection and review of long-term impacts.

A further and important feature of the Project's risk profile is its reversibility. Unlike fixed onshore industrial developments, the Eden-1 Kelp Aquaculture Farm can be removed in its entirety from the marine environment. The Decommissioning Plan provided at EIS Section 4.15 sets out the process for full removal of the longline infrastructure, including retrieval of all backbone and dropper lines, buoyancy floats, anchor systems and lease boundary markers, with the seabed returning to its pre-development state. No permanent seabed modification, dredging, blasting, pile driving or fixed structures are proposed (EIS Section 1.5 and Section 4.1). The Project therefore does not commit the marine environment of Disaster Bay to a permanent change of use.

This reversibility is reinforced by the regulatory framework under which the Project will be authorised. The Project will operate under an aquaculture permit and lease issued by DPIRD Fisheries under the *Fisheries Management Act 1994* and the NSW Marine Waters Sustainable Aquaculture Strategy (MWSAS), in addition to any conditions of consent imposed by the Independent Planning Commission. Where ongoing monitoring, audit findings, or compliance review indicate that environmental impacts are occurring outside acceptable limits or are inconsistent with the conditions of consent, DPIRD Fisheries retains the statutory authority to suspend, vary, cancel or refuse to renew the aquaculture lease and permit under the *Fisheries Management Act 1994*. The consent authority similarly retains its statutory powers under the *Environmental Planning and Assessment Act 1979* in respect of the conditions of consent.

Independent and external review

The EIS is subject to multiple layers of independent review and assessment. These include:

- preparation and certification by a Registered Environmental Assessment Practitioner under the NSW REAP Scheme;
- engagement of independent specialist sub-consultants responsible for the technical assessments underpinning the EIS;
- formal review by NSW Government agencies during exhibition;
- public exhibition through the NSW Government Major Projects Portal;
- review of the EIS, agency advice, submissions and this Submissions Response Report by the NSW DPHI as the assessment authority;
- if required; determination by the Independent Planning Commission as the consent authority for the Project, following the Department's Assessment Report.

Engagement with submissions on scientific representation

Auskelp acknowledges the substantive objections lodged by Dr Virginia Shepherd, Jane Skelton, Dr Toni Roberts, Stanys Saniga, Adam Chorvat and Alex Felson and the references provided to peer-reviewed

studies (including references from Dr Shepherd to Campbell et al. 2019; Forbes et al. 2022; Bekkby et al. 2023; Grebe et al. 2019). Auskelp has reviewed each of the references provided. Where matters raised are aquaculture-scale and risk-management matters, they are addressed in the relevant impact categories (Biodiversity Section 4.5, Whale Entanglement Section 4.6, Water Quality Section 4.7, Microplastics and Marine Debris Section 4.8). Where matters raised relate to particular characterisations made in the EIS, those characterisations are clarified within the relevant category responses.

Note: Dr Shepherd included a peer reviewed reference: Bekkby et al. 2023, which on Proponent review is an incorrect citation and should be read as: Egar et al. 2023.

Assessment Outcome

The issues raised in submissions regarding the adequacy, scientific integrity and risk assessment methodology of the Environmental Impact Statement have been comprehensively reviewed as part of this Submissions Response Report. This review has included consideration of all public submissions, agency advice, cited scientific literature and additional clarification provided by the Proponent and its specialist consultants.

The assessment confirms that the Environmental Impact Statement was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs), the NSW State Significant Development Guidelines, and the Registered Environmental Assessment Practitioner (REAP) Scheme. The environmental risk assessment methodology remains consistent with the National Ecologically Sustainable Development (ESD) Reporting Framework for Fisheries and Aquaculture (Fletcher et al., 2004; revised 2020), a nationally recognised and widely adopted framework for evaluating environmental risks associated with fisheries and aquaculture developments.

The Proponent has carefully reconsidered each residual risk rating in light of the matters raised throughout the exhibition process, including that from Agency advice. Following this comprehensive review, no new evidence has been identified that warrants amendment to the adopted likelihood, consequence or residual risk ratings presented in the EIS. The risk assessments remain evidence-based, internally consistent and appropriate when assessed against the adopted ESD criteria and the available site-specific information, international scientific literature, existing operational experience, and the proposed mitigation, monitoring and adaptive management measures.

The Proponent therefore remains satisfied that the Environmental Impact Statement provides a robust and scientifically supported assessment of the Project and that the residual environmental risks have been appropriately identified, assessed and managed. The conclusions reached in the EIS remain unchanged.

4.4 Wilderness & Coastal Character

Description of the category

This category captures matters raised regarding the impact of the Project on the wilderness and natural character of Disaster Bay and the adjoining coastline, including the Nadgee Nature Reserve, Greenglades Beach, and the broader Wonboyn locality. Issues raised include the introduction of commercial-scale aquaculture into a largely undeveloped seascape, the precedent the Project may set, and impacts on the wilderness experience valued by residents, visitors and Traditional Owners.

Number of submissions in support: 3 (3 Public).

Number of submissions in objection: 180 (178 Public, 2 Organisation).

Number of submissions providing comment: 2 (Public).

Representative quotes — Support

"For more than 50 years I have been visiting and staying at Wonboyn NSW. The development of the Eden-1 Kelp Aquaculture Farm is supported. The Mar2026 proposed EIS indicates it is well planned and offers an enormous long-term benefit to the area." — Leigh Hemingway (Elwood, Vic)

"The South Coast is the right place for it … A kelp farm in open ocean, sub-surface and kilometres offshore, does not compete for nearshore leases. It gives the existing workforce a second line of work on country they already know." — Sacha McMonagle-Ihasz (Richmond, Vic)

Representative quotes — Objection

"Disaster Bay is widely regarded as the most pristine marine environment in the region and abuts the Nadgee Nature Reserve, the only coastal wilderness in NSW. It is the wrong location for a large commercial enterprise." — Jane Skelton (Faulconbridge, NSW)

"I object strongly to the proposed kelp farm at Disaster Bay - the last undisturbed, pristine coastal-marine system in NSW. My main objection is that this facility will fundamentally change the character of this remote, natural site." — Paul Whitington (Wonboyn, NSW)

"The marine environment of Disaster Bay is immediately adjacent to the Nadgee Wilderness area. Indeed, in ecological terms, it is part of that unique natural area … Industrial developments do not belong in such a place." — Kerri-Lee Harris (Wonboyn, NSW)

"Disaster Bay is an increasingly rare example of a relatively undeveloped and minimally disturbed stretch of coastline." — Charlotte Robinson (St Kilda, Vic)

Agency Review

Agency review by DPHI requested further information regarding risk visual assessment and noise. Responses to these matters are addressed in the following section (click to view):

Section 5.13.1 Impacts on local Character and Amenity.

RESPONSE

Auskelp acknowledges the deep value placed by submitters on the wilderness and natural character of Disaster Bay, Nadgee Nature Reserve, Greenglades Beach and the broader Wonboyn locality. In addition, Auskelp acknowledges the genuine environmental significance of the Nadgee–Disaster Bay area and does not seek to diminish it. It is correct that Nadgee Nature Reserve contains the only declared Coastal Wilderness Area in New South Wales (NPWS, under the Wilderness Act 1987), and the ecological values of that reserve are real and important. It is necessary, however, to distinguish two separate matters that several submissions have conflated. The wilderness and nature reserve designations are terrestrial conservation instruments that apply to the land of the reserve and to its enclosed estuarine waterways — Nadgee Lake, Nadgee River and Merrica River. The Project lease is located in the open marine waters of Disaster Bay, outside the boundary of Nadgee Nature Reserve and its declared wilderness, and does not encroach upon any part of the protected area or its waters.

The further comments in several submissions — that Disaster Bay represents "the last" or "the only" undisturbed or pristine coastal-marine system in New South Wales — is not supported by available scientific evidence.

The NSW EPA's *Broadscale microplastic assessment of NSW estuaries* (2026) attached as Appendix RD1, which assessed 120 coastal waterways across the State, identifies numerous minimally disturbed, near-pristine systems and bays distributed along the entire NSW coastline. Thirty-six of the 120 waterways assessed fall within the two lowest microplastic-contamination grades — four graded A (very low) and thirty-two graded B (low) — and the single least-contaminated, most-pristine waterway in the entire State is not in the far south at all, but Myall Lake on the Mid North Coast, which the EPA attributes to its small, minimally disturbed catchment with a permanently open entrance. The far south coast is genuinely high in environmental value, but it is not unique or singular in that respect; near-pristine coastal systems remain a recurring, identifiable feature of the NSW coast rather than a sole surviving example.

<u>Existing aquaculture context — Wonboyn Lake oyster farming</u>

The waters immediately adjoining Nadgee Nature Reserve and the proposed kelp aquaculture lease — within Wonboyn Lake and the Wonboyn River estuary — have supported significant commercial oyster aquaculture for many decades, with approximately 47 hectares of oyster leases currently operating (EIS Section 1.5). The

Wonboyn oyster industry uses rope and buoy infrastructure, longlines, plastic baskets and trays, requires daily operational vessel movements, and produces a commercial output for domestic and export markets. It is an established, accepted and valued part of the Wonboyn community. It is, in operational terms, more visible and more continuous within the local seascape than the proposed offshore kelp lease will be.

The community's longstanding acceptance and admiration of oyster aquaculture at Wonboyn is significant because the same categories of objection raised in opposition to the kelp farm — introduction of synthetic ropes and floats into the marine environment, microplastic shedding, visual presence of buoys and lines, vessel movements, commercial-scale operations within a "pristine" embayment, precedent for industry on a wild coast — would, if applied consistently, also rule out the oyster industry at Wonboyn. The Wonboyn oyster industry has operated for generations alongside Nadgee Nature Reserve and the wider conservation estate, and is widely regarded by the community as compatible with — indeed, part of — the character and identity of the Wonboyn locality.

Auskelp does not advance this comparison to dismiss the concerns of submitters. It simply demonstrates that commercial aquaculture using rope-and-float infrastructure is capable of coexisting with the wilderness character valued by the community. The Project's design — offshore, sub-surface, native species, no feed/fertiliser/chemical inputs, no land-based footprint, and infrastructure being fully recoverable — is in many respects less intrusive than the inshore oyster aquaculture that the community accepts as part of the Wonboyn/Nadgee Nature Reserve experience.

Scale of coastline

It is important to place the Project within the broader scale of coastline south of Twofold Bay. There is currently no offshore development from the southern entrance of Twofold Bay at Boyd's Tower, 70 km along the NSW coastline to Cape Howe at the New South Wales–Victorian border. The coastline passes along Beowa National Park (formerly Ben Boyd National Park), Disaster Bay, and Nadgee Nature Reserve. The addition of a 200-hectare offshore aquaculture project within this vast ocean area by some measure can be considered as very small in respect to overall coastline and seascape area.

Project siting and design

The lease is positioned a minimum of 1.1 km offshore from Greenglades Beach at the closest corner and >1.1 km from the Nadgee Nature Reserve Declared Wilderness Area. No infrastructure will be visible from any residential location (EIS Section 9.3.1). The longline infrastructure is predominantly sub-surface, with only navigation corner markers and surface floats visible. The design uses low-profile infrastructure, muted non-reflective colours (except where navigation safety requires), and a best-practice layout that minimises visual contrast with the surrounding seascape (EIS Section 9.3.1).

Visual Assessment

As requested by DPHI, a detailed response to local character and amenity is provided at Section 5.13.1 Impacts on Local Character and Amenity by way of further visual assessment. In response, viewpoint photography was gathered from the requested publicly accessible vantage points, including Disaster Bay Lookout, Green Cape, Merrica and the north and south ends of Greenglades Beach, each identifying the position of both the test farm and the proposed AL21/004 lease area to enable direct comparison of distance and visibility. The assessment draws on the long-term in-water demonstration — the existing Auskelp Section 37 offshore test farm, deployed in Disaster Bay for more than two years

Passive nature of the operation

Unlike intensive finfish or shellfish aquaculture, the Project is passive. There is no continuous human activity, no daily feeding regime, and no sustained vessel presence. Vessel activity is intermittent and scheduled, aligned with seeding, ongoing monitoring and harvest events. The farm is designed to be unoccupied for large parts of the year, between post-harvest and reseeding (EIS Section 9.3.1).

Land-based footprint

The Project does not introduce any new permanent land-based infrastructure within the Wonboyn locality, Nadgee Nature Reserve, or any adjoining coastal reserve. The earlier-proposed commercial vehicle access

route through Nadgee Nature Reserve via Greenglades Road was withdrawn following early engagement with NSW NPWS (EIS Section 9.2 and Section 9.3.2). Onshore support uses existing port and industrial infrastructure at Snug Cove and the Edrom precinct — no new buildings, wharves or facilities are proposed under this SSD application (EIS Section 4.1).

Precedent

The Project does not establish a precedent for onshore industrial development of the coastline. It sits within the existing aquaculture lease classification AL21/004 identified through the NSW Marine Waters Sustainable Aquaculture Strategy (MWSAS) framework and is being assessed under the State Significant Development pathway specifically because of the recognised need for rigorous environmental review in NSW coastal waters. Future aquaculture proposals at Disaster Bay (or elsewhere on the NSW coast) are all subject to the same statutory SSD framework and the same level of scrutiny.

Reversibility

The Project is fully reversible. The Decommissioning Plan at EIS Section 4.15 provides for complete removal of all longline infrastructure, mooring lines, buoyancy floats and helical screw anchors, returning the seabed to its pre-development state. No permanent seabed modification, dredging, blasting, pile driving or fixed structures are proposed (EIS Sections 1.5 and 4.1). The character of Disaster Bay can be fully restored at the end of the Project's operating life, or earlier if required under the regulatory mechanisms available to DPIRD Fisheries and described in Section 4.3 of this report.

Assessment Outcome

Auskelp recognises the strength of feeling reflected in the submissions and the genuine value the community, visitors and Traditional Owners place on the wilderness and coastal character of Disaster Bay, Nadgee Nature Reserve and the Wonboyn locality.

The Project lies in the open marine waters of Disaster Bay, outside the boundary of Nadgee Nature Reserve and outside any declared coastal wilderness area. The Project does not encroach on the Nadgee reserve, its enclosed waterways or any adjoining conservation estate. Commercial rope-and-float aquaculture has operated within the waters immediately adjoining Nadgee Nature Reserve — the Wonboyn oyster industry — for more than 40 years, and is accepted by the community as part of the locality's character, demonstrating that aquaculture of this kind can coexist with the wilderness values. The proposed offshore kelp lease is, by design, objectively less intrusive than that accepted inshore industry and is located >1.1 km offshore.

Critically, this is not only a theoretical assessment. The Auskelp Section 37 offshore test farm has been deployed in Disaster Bay for more than two years, providing a direct, real-world demonstration of how infrastructure of the type proposed presents within this seascape across the full range of weather, sea-state and lighting conditions. The viewpoint photography compiled in Section 5.13.1 from Disaster Bay Lookout, Green Cape, Merrica and Greenglades Beach confirms that the test farm, sited closer to shore than the proposed lease, is an excellent reference for the visual and operational impacts of Project.

The visual amenity and wilderness character assessment at EIS Section 9.3.1 concludes that the impact has been assessed as low as per the EIS, localised and compatible with the character of the surrounding seascape. This assessment has regard to the offshore location, the sub-surface nature of the infrastructure, the absence of fixed land structures, the intermittent and seasonal nature of vessel activity, and the established acceptance of aquaculture within the locality.

4.5 Biodiversity

Description of the category

This category captures matters raised regarding the impacts of the Project on marine biodiversity, including kelp and rocky reef ecosystems, threatened and protected species, the benthic environment within and adjacent to the lease, the introduction of disease or marine pests via aquaculture activity, the cultivation of a single species at scale (monoculture), biofouling, broodstock collection, and the integrity of adjacent terrestrial conservation areas.

Number of submissions in support: 14 (11 Public, 3 Organisation).

Number of submissions in objection: 150 (148 Public, 2 Organisation).

Number of submissions providing comment: 2 (Public).

Representative quotes — Support

"Kelp aquaculture is globally recognised as one of the most sustainable forms of ocean farming, requiring no freshwater, fertiliser, feed, or arable land. By cultivating the native species Ecklonia radiata in high energy offshore waters, the project … contributes to nutrient cycling, habitat complexity, and carbon sequestration — these ecosystems systems are increasingly important as wild kelp forests decline along Australia's coastline." — Anna Cooke (Pambula, NSW)

"Our southern kelp forests are in measurable decline. A farm doesn't save a forest, but it builds the people, hatcheries and field experience we'll need when restoration stops being optional." — Sacha McMonagle-Ihasz (Richmond, Vic)

"Seaweed has an extraordinary ability to absorb carbon and excess nutrients, improve water quality, and support marine biodiversity." — Anthony Peacock (Mount Warrigal, NSW)

Representative quotes — Objection

"The biodiversity of this area is substantial, and is only now starting to be understood. For example, several species of invertebrates have recently been discovered in the area." — Thomas Whitington (Object)

"AusKelp's benthic snapshot, a single survey during winter, revealed communities of organisms (74 fauna and two algae) … A Big Bellied seahorse (protected species) was present … The site's natural communities play a vital ecological role. Infrastructure, shading, anchors and a seaweed not normally occurring will alter the kind of nutrient cycling normally present." — Jane Skelton (Faulconbridge, NSW)

"The kelp farm is a monoculture of kelp which is a highly unnatural and is unsupportive of diversity. It will not be beneficial to fish species or improve fishing as Aus Kelp suggests, that's because this is not how an ecosystem works." — Stanys Saniga, scientist (St Kilda East, Vic)

"The EIS fails to assess risks to wild golden kelp beds, situated on rocky reefs at Greenglades and Merrica River mouth … Eden1 infrastructure provides large-scale artificial habitat for booming Electroma populations that pose the risk of spreading to and infesting wild Ecklonia kelp beds." — Dr Virginia Shepherd, PhD aquatic biology (Faulconbridge, NSW)

"Constructing a kelp farm in a high value habitat area requires careful audited research and assessment prior to any action." — Alex Felson, Elisabeth Murdoch Chair of Landscape Architecture, University of Melbourne; PhD Ecology (Kew, Vic)

"Boats regularly working the area, buoys lit up all night every night, potential for damage from large seas and swell events not to mention the biosecurity risk of introducing a genetically modified kelp into an area of such fragile balance." — Anonymous (Wonboyn, NSW)

Agency Review

Agency review by DPIRD Fisheries, DCCEEW and DPHI requested further information on marine habitats, threatened species, marine mammals, biosecurity, fish assemblages, benthic habitat, ecological processes and cumulative effects. Responses to these matters are addressed in the following sections (click to view):

Section 5.13.16 Assessment of Significance

Section 5.13.17 Biologically Important Areas

Section 5.13.20 Risk Evaluation

RESPONSE

It is important to begin this response by acknowledging a fundamental ecological context that underpins every biodiversity matter raised. Wild kelp forests along the NSW coastline, and more broadly throughout

southern Australia, are not stable or unthreatened ecosystems. They are experiencing documented and accelerating declines in both extent and condition, with consequential impacts on the biodiversity, ecological functions and ecosystem services they support. This is not a hypothetical future risk, but a well-established and ongoing environmental trend recognised in the scientific literature.

The exhibited EIS sets out the evidence at Section 4.8. Key points include:

- **Increasing marine heatwaves in NSW.** New South Wales waters have experienced an increase in the frequency, duration and intensity of marine heatwaves, particularly since the 2015/16 Tasman Sea event, with projections indicating such events will become more common under current climate trajectories (Oliver et al., 2017; Oliver et al., 2018).
- **Urchin barrens in NSW waters.** Urchin barrens formed by the longspined sea urchin (*Centrostephanus rodgersii*) are an extensive feature of NSW rocky reefs and are projected to expand along the far NSW south coast under continued ocean warming (Przeslawski et al., 2025).
- **Forecast decline in *Ecklonia radiata* under climate change.** Modelling for south-eastern Australia forecasts a significant reduction in the distribution and biomass of *Ecklonia radiata* forests over coming decades under the combined stressors of ocean warming and associated ecological change (Davis et al., 2022).
- **East Australian Current (EAC) strengthening.** The EAC has been progressively strengthening and extending southward, transporting warmer, nutrient-poor water further down the NSW coast, with associated impacts on kelp productivity through warming-driven tropicalisation and increased herbivory (Vergés et al., 2016), and facilitating the southward range extension of the longspined sea urchin (*Centrostephanus rodgersii*) — a species that has caused extensive urchin barrens replacing kelp forest in north-eastern Tasmania and along the southern NSW coast (Przeslawski et al., 2025).
- **Ecologically irreplaceable habitat.** *Ecklonia radiata* is a foundation species that structures temperate reef ecosystems and supports commercially and ecologically important species including morwong, snapper, lobsters and abalone (Coleman & Wernberg, 2017; EIS Section 7.9). The temperate reef system these kelp forests support — Australia's Great Southern Reef — is one of the most biodiverse temperate marine ecosystems on Earth, and is under recognised pressure from climate change, urchin range extension and cumulative coastal stressors (Bennett et al., 2016).

This context is foundational to the assessment of the Project. The biodiversity values that submitters describe as needing protection are correct in every respect — Disaster Bay's marine environment is ecologically significant, and the wider Great Southern Reef system is of national importance. But the assumption embedded in many objecting submissions — that the marine environment of Disaster Bay is a healthy, stable system that will remain so if left untouched — is not supported by the science. The system is under stress. Wild *Ecklonia radiata* beds along the NSW coastline are vulnerable to the same drivers that have caused functional extinction elsewhere. The status quo is not a guarantee of continuity.

Auskelp does not represent the Project as a substitute for wild kelp forest, nor as a restoration project in itself. What the Project does is build — for the first time in Australia — the cultivation science, hatchery propagation capacity, broodstock management, genetic conservation tools, operational expertise and trained workforce that will be required if wild kelp forest restoration becomes an unavoidable necessity in coming decades. This is the strategic context highlighted in supporting submissions, including from Sacha McMonagle-Ihasz: "A farm doesn't save a forest, but it builds the people, hatcheries and field experience we'll need when restoration stops being optional." The capacity built by Eden-1 is directly transferable to future kelp recovery and assisted-restoration projects under the Great Southern Reef framework and the work being progressed through the Marine Bioproducts Cooperative Research Centre, of which Auskelp is a core partner (EIS Section 1.1).

That biodiversity is already under threat does not lessen the obligation to assess this Project rigorously. It does, however, materially change the appropriate framing. Doing nothing carries its own biodiversity cost.

Auskelp Testing Program

Agency review by DPHI requested further information regarding the Auskelp Section 37 Testing Programs. Responses to these matters are addressed in the following sections (click to view):

Section 5.13.4 Scientific Evidence

A number of submissions characterise the Project as a large-scale experiment being proposed in the absence of sufficient research or operational understanding. Auskelp respectfully disagrees with this characterisation. The Eden-1 Project is the culmination of more than four years of laboratory and hatchery research and development, together with more than three years of offshore cultivation testing.

Auskelp commenced hatchery development and propagation research in December 2021 with the objective of establishing reliable cultivation methods for the native NSW kelp species *Ecklonia radiata*. The first successful zoospore induction was undertaken in June 2022, marking the commencement of controlled propagation and seedstock development. Since that time, Auskelp has progressively developed and refined gametophyte cultivation, sporophyte production, hatchery biosecurity systems, seedstock preparation techniques and offshore deployment procedures.

Open-ocean cultivation testing commenced in Twofold Bay in February 2023 and expanded into Disaster Bay in February 2024 under a NSW Fisheries Section 37 research permit. Since then, Auskelp has undertaken continual cultivation projects and infrastructure trials under a broad range of environmental conditions, including seasonal temperature variation, elevated sea temperatures, major storm events, naturally occurring natural biofouling cycles, changing nutrient conditions and variable oceanographic conditions. The testing program has provided site-specific information regarding kelp growth rates, survivorship, reproductive development, fouling communities, infrastructure performance, maintenance requirements, harvest timing, hatchery-to-ocean deployment processes and environmental interactions within the Eden and Disaster Bay region.

The development program has also benefited from the ongoing involvement of internationally recognised researchers and practitioners specialising in the propagation, cultivation and ecology of Laminarian kelps. Since the commencement of the Project, Auskelp has worked with leading Australian and international scientists with expertise spanning kelp reproduction, hatchery systems, offshore cultivation, restoration ecology, marine biology and seaweed biotechnology. Importantly, key scientific advisers have remained involved throughout the duration of the research and development program, providing continuity of knowledge and independent technical input as cultivation methods, hatchery protocols, biosecurity procedures and deployment systems have evolved. This has enabled lessons learned from successive laboratory, hatchery and offshore trials to be incorporated into subsequent project stages and has helped ensure that the Project reflects both international best practice and the latest scientific understanding of Laminarian kelp cultivation.

Importantly, the testing program has informed the development of the Environmental Management Plan, Biosecurity Plan, hatchery protocols, broodstock management procedures, marine fauna interaction procedures, monitoring programs and adaptive-management framework proposed for Eden-1. Several key controls described throughout the EIS—including the use of local provenance seedstock, broodstock replenishment, hatchery biosecurity measures, reproductive monitoring, harvest before reproductive maturity and annual infrastructure removal—have been developed and refined through practical testing and observation rather than relying solely on desktop assessment or overseas literature.

The testing program has also enabled direct observation of interactions between cultivated kelp, naturally occurring fouling organisms, fish assemblages, marine mammals, seabirds and the wider marine environment. To date, no adverse environmental impacts have been identified during the research and testing program. While ongoing monitoring remains essential as cultivation expands beyond research scale, the Project is informed by an extensive body of local operational knowledge accumulated through years of laboratory, hatchery and offshore field testing.

Agency review by DPHI requested further information regarding scientific evidence. Responses to these matters and a summary Eden-1 Technical Testing and Development Report (attached as Appendix RB5) are addressed in Section 5.13.3.

Accordingly, the Eden-1 Project should not be viewed as a proposal commencing from a position of limited understanding. Rather, it represents the progression of a structured, multi-year research and development program specifically undertaken to reduce uncertainty, identify potential environmental risks, and develop appropriate environmental controls before commercial-scale cultivation is considered. Collectively, this work represents some of the most extensive native *Ecklonia radiata* ocean cultivation programs undertaken in Australia which has generated a substantial body of site-specific knowledge relevant to the assessment of environmental effects in the Eden and Disaster Bay region.

Statutory framework, EPBC determination, and threatened species assessment

The biodiversity assessment within the EIS has been prepared in accordance with the *Biodiversity Conservation Act 2016* (NSW), the *Fisheries Management Act 1994* (NSW), and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). The exhibited EIS addresses threatened species, populations and ecological communities at Sections 7.10 to 7.15, with detailed impact assessment at Sections 9.4.6 to 9.4.8. A targeted BioNet search identified 619 species across the wider region, with 38 species likely or potentially associated with Lease AL21/004 and its adjacent marine environment (EIS Section 7.11). An Assessment of Significance under section 7.3 of the BC Act has been undertaken for relevant species. Conservation Planning and Assessment (DCCEEW) has confirmed that the EIS is consistent with the BDAR waiver provisions signed by the delegate on 19 November 2025, and that no further comment on terrestrial biodiversity values is required.

In May 2025 Auskelp referred the Project under the *Environment Protection and Biodiversity Conservation Act 1999*. On 20 June 2025 the Commonwealth Department of Climate Change, Energy, the Environment and Water issued a formal determination (EPBC 2025/10149) confirming the Project is **not a controlled action** under section 75 of the EPBC Act — meaning the Project is not likely to have a significant impact on any Matter of National Environmental Significance and no additional Commonwealth approval conditions are required (EIS Section 7.13).

In response to advice from DPIRD Fisheries that Table 4 of the EIS does not include all FM Act-listed threatened species with the potential to occur in the locality, Auskelp has prepared an Assessment of Significance for five additional species: Grey Nurse Shark (*Carcharias taurus*, CE), White Shark (*Carcharodon carcharias*, V), Southern Bluefin Tuna (*Thunnus maccoyii*, E), Black Rockcod (*Epinephelus daemelii*, V) and Australian Grayling (*Prototroctes maraena*, E). The document is attached as Appendix RB1 Assessment of Significance and has been prepared in accordance with the NSW DPI *Threatened Species Assessment Guidelines*.

Lease siting, benthic environment and habitat

The lease has been positioned over unconsolidated soft sediments at 20–25 m depth, deliberately avoiding the rocky reef habitats and macroalgal assemblages that occur near the perimeter of Disaster Bay along the Green Cape and Nadgee headlands (EIS Section 7.9). Multiple side-scan survey passes (most recently in June 2026) as well as seabed assessment undertaken by Elgin Associates (2025) — using side-scan sonar, BRUV, towed video transects and underwater drone survey — confirmed the predominance of fine sandy sediments and the total absence of rocky or reef habitats within the proposed footprint (EIS Section 7.9, Appendix A9). The wild *Ecklonia radiata* beds that occur on rocky reefs near Green Cape and Merrica River mouth — the very beds whose long-term viability is under threat from the broader trends described above — are located outside the proposed lease footprint and will not be physically disturbed by the development (EIS Section 4.8).

Shading and effects on the water column

The longline cultivation lines hang vertically in the upper water column and the spatial extent of any shading is small relative to ambient seasonal variation in surface irradiance. The 200-hectare lease will contain up to approximately 100 ha of active longline infrastructure, with the remainder reserved for vessel access, hydrodynamic spacing and open-water corridors (EIS Section 4.1). Shading impacts on benthic habitats below the lease are assessed in EIS Section 9.4.1, Risk Table 15.

Monoculture and habitat creation

Auskelp acknowledges the concerns raised that a 200 ha cultivated kelp installation is, in ecological terms, a single-species cultivated environment rather than a natural mixed kelp forest. *Ecklonia radiata* is a native species occurring locally in Disaster Bay (EIS Section 4.8); the cultivation is undertaken using locally sourced seedstock collected within 10 km of the lease (EIS Section 1.2).

The operation cultivates a single kelp species, and on that basis is sometimes characterised as a "monoculture". The term, however, is borrowed from terrestrial agriculture, where it denotes a system that is input-intensive, habitat-simplifying and ecologically depleting. Applied to kelp farming operations, the analogy fails on every count that gives the term "monoculture" its meaning.

The farm adds nothing to the environment. There is no tillage, no fertiliser, no pesticide, no freshwater, and no feed. The crop draws nitrogen, phosphorus and carbon directly from the water column, so the system is extractive rather than input-loading — it removes nutrients and provides localised bioremediation, the inverse of the eutrophication and chemical runoff that drive the ecological objections to terrestrial monoculture.

Nor does kelp farming simplify habitat. A terrestrial monoculture displaces the ecosystem it replaces; the longlines and kelp canopy instead add three-dimensional structure to open water, recruiting wild epiphytes, invertebrates, fish and other mobile fauna. The cultivated species is only *Ecklonia radiata*, but the assemblage living on and around the infrastructure is not, and the surrounding seabed and water column remain fully wild. The operation augments biogenic habitat rather than replacing a natural community with a single crop. The cultivated stand is also embedded within, not isolated from, the surrounding ecosystem. It is sourced from local broodstock, sits among waters with extensive wild kelp forests of the same and other species, and is harvested before reproductive maturity — so it neither introduces foreign genotypes nor establishes a self-perpetuating, genetically uniform population in the way a sown terrestrial crop does.

In short, the operation is a single-species crop but "not a monoculture" in any ecologically meaningful sense: it is input-free, habitat-forming, nutrient-extractive and embedded within the existing marine ecosystem — the opposite of the depleting, simplifying systems the term was coined to describe.

Biosecurity

It is important to be precise about the biosecurity risk profile of kelp aquaculture. Kelp aquaculture is consistently assessed by national and international authorities as one of the lowest-biosecurity-risk forms of marine aquaculture, particularly when compared with finfish, crustacean or molluscan production. The reasons are well established and are set out at EIS Section 4.8:

- Kelp is an autotrophic organism that draws dissolved nutrients directly from seawater and fixes carbon through photosynthesis. It does not feed and does not filter waterborne particles, and therefore does not concentrate pathogens the way filter-feeding bivalves do or accumulate them through feed inputs as in finfish systems — eliminating the bioaccumulation pathways that drive pathogen transmission in those systems (Kim et al., 2017);
- Kelp cultivation involves no antibiotics, no hormones, no veterinary inputs, no formulated feed and no chemical additives, and produces no nutrient discharge — removing the principal disease- and pollution-related pathways associated with fed aquaculture (Kim et al., 2017; Campbell et al., 2019);
- *Ecklonia radiata* is not associated with any disease listed on Australia's national list of reportable diseases of aquatic animals, and there is no macroalgal disease currently nationally listed as reportable; kelp aquaculture is recognised internationally as a low-disease-risk activity (DAFF, 2024; Buschmann et al., 2017);
- The cultivated species is native to the region, with seedstock sourced exclusively from wild stock within 10 km of Disaster Bay (EIS Section 1.2), so the operation cannot introduce a non-native species or locally absent genotypes;
- Australia's temperate marine waters are geographically isolated and support a lower baseline of introduced marine pests and diseases than the intensively farmed seaweed-producing regions of Asia and Europe, where most macroalgal disease and pest issues have been documented (Campbell et al., 2019; Cai et al., 2021); and

- Internationally, where related kelp species within the order Laminariales (such as *Saccharina latissima* and *Macrocystis pyrifera*) are widely cultivated, kelp aquaculture has been consistently assessed as low impact with minimal biosecurity concern (Kim et al., 2017; Cai et al., 2021).

Even so, Auskelp does not represent kelp aquaculture as carrying zero biosecurity risk, and the EIS does not make that claim. The international literature documents disease entities affecting commercially cultivated seaweeds globally — a recent systematic review identified at least 16 such disease entities reported since the late 1980s, occurring in both open-water and nursery systems, with incidence rising as production intensifies and under climate-change stressors (Ward et al., 2026; see also Ward et al., 2020). Accordingly, DCCEEW and DPIRD Fisheries requested the Biosecurity Plan address specific kelp diseases of biosecurity concern, notifiable and prohibited matter under the Biosecurity Act 2015 (NSW), and marine pest detection within biofouling. Recognising that risks exist — even where small — and managing them proactively is the foundation of responsible biosecurity practice.

The combination of (a) Australia's status as a comparatively low-baseline disease environment, with no infectious disease of native *Ecklonia radiata* listed as reportable nationally; (b) the cultivation of a native species using locally sourced seedstock; (c) the absence of feeding, chemical or veterinary inputs; (d) the substantially expanded standalone Biosecurity Plan addressing all matters identified by DPIRD Fisheries and DCCEEW; and (e) ongoing oversight through the aquaculture permit, together provide a robust biosecurity framework appropriate to the operational profile of the Project.

Biofouling — including *Electroma georgiana*

Auskelp acknowledges Dr Shepherd's observation of *Electroma georgiana* on beach-cast kelp opposite the test site, and her concern that Eden-1 infrastructure could act as a propagule source for *Electroma* populations that subsequently affect wild *Ecklonia radiata* beds at Greenglades and the Merrica River mouth. The concern is reasonable and is addressed below.

Electroma georgiana is a native pearl-oyster species already established in Disaster Bay and already present on wild *Ecklonia radiata*, as Dr Shepherd's own observation confirms. The central point is therefore one of mechanism: the Project does not introduce the species, does not introduce a novel host, and does not create a new dispersal pathway. Eden-1 cultivates *Ecklonia radiata* grown from wild parent stock sourced within 10 km of the lease (EIS Section 9.4.2), so the cultivated substrate is the same native species on which *Electroma* already settles in the wild, and wild *Electroma* propagules already disperse across the bay through natural larval transport.

Auskelp accepts that cultivation infrastructure provides additional hard substrate on which native epibionts, including *Electroma*, may settle. Several operational and physical features of the Project constrain that increment and the propagule-source mechanism Dr Shepherd describes:

- The vertical kelp culture lines — the principal substrate available for *Electroma* settlement — are removed from the water after each harvest (EIS Section 9.4.1), seasonally interrupting any population build-up at the lease rather than allowing it to persist year-round.
- Horizontal backbone lines are inspected and cleaned periodically by manual methods under the Monitoring and Maintenance Plan.
- Disaster Bay's high flushing rate (approximately 1.5–2.5 day turnover) and wide, ocean-facing mouth (~9.8 km) disperse any propagules across the open-coastal system rather than concentrating them at the lease or along a particular shoreline.

Wild *Ecklonia radiata* beds in Disaster Bay occur intermittently on rocky-reef substrate around the bay's perimeter and are spatially separated from the lease (Greenglades approximately 1.1 km; the Merrica River mouth and surrounding reef several kilometres). These beds already support native epibionts, including *Electroma georgiana*, as part of the existing ecological baseline. Despite more than two years of testing, *Electroma georgiana* has not been observed on the cultivation longlines.

On this basis, the *Electroma georgiana* pathway is assessed as a marginal, seasonally-interrupted addition to an existing natural background rather than a new or amplifying biosecurity mechanism, and is managed

through harvest removal, routine line cleaning, and the biofouling monitoring provisions of the Biosecurity Plan and Monitoring and Maintenance Plan.

Genetics, Seedstock and Reproductive Management

The Project incorporates multiple independent controls specifically designed to minimise genetic and ecological interaction with surrounding wild kelp populations. All cultivated *Ecklonia radiata* is derived exclusively from locally sourced broodstock collected within 10 km of Disaster Bay under permit, ensuring that cultivated stock remains genetically representative of the natural populations already occurring within the receiving environment (EIS Sections 1.2 and 9.4.2). No non-native species, selectively bred strains, genetically modified organisms, gene-edited organisms or transgenic material are used at any stage of the cultivation process.

A key biological control is the timing of harvest. The majority of cultivated biomass is harvested before reaching reproductive maturity and before sori development, spore release or gamete production occurs. Reproductive maturity in *Ecklonia radiata* is size-dependent and can only occur post the Stage 3 growth phase. By harvesting the bulk of the crop prior to this stage, the Project substantially limits the primary pathway through which cultivated kelp could contribute reproductive material to surrounding wild populations. Sori development is readily identifiable and monitored throughout the cultivation cycle.

The Project seeks to avoid genetic bottleneck effects that can arise when aquaculture relies on a closed breeding population. Broodstock is continually replenished from the wild population. A minimum base population of 20 wild parent individuals is maintained, with no fewer than 12 additional wild individuals incorporated annually throughout the operational life of the Project. Note: this incorporation number can be increased where required. This ongoing introduction of wild genetic material ensures continued genetic exchange between wild and cultivated stock, maintains genetic diversity within the hatchery program and prevents divergence of cultivated stock from the surrounding natural population.

Together, the combination of local provenance, continual wild replenishment, absence of genetic modification, harvest before reproductive maturity, and the prohibition on stock enhancement or deliberate release of cultivated kelp into natural reefs creates multiple independent barriers that minimise genetic and ecological risk. Rather than creating a genetically distinct cultivated population, the Project maintains a direct and ongoing connection to the local *Ecklonia radiata* populations already present within Disaster Bay.

Importantly, the hatchery capability developed through Eden-1—including gametophyte cultivation, seedstock production, reproductive monitoring and propagation techniques — may have benefit beyond commercial cultivation. As wild *Ecklonia radiata* stands face increasing pressure from marine heatwaves, East Australian Current strengthening, tropicalisation and expanding sea urchin barrens, the expertise and knowledge developed through the Project represent a strategic capability that may support future kelp restoration, conservation and climate-adaptation initiatives across New South Wales and southern Australia.

Genetically modified:

Two submissions characterised the cultivated kelp as 'genetically modified. This claim is incorrect. The Project does not use genetically modified organisms of any kind. No genetic engineering, gene editing, transgenic modification, or any other form of genetic manipulation is undertaken or proposed at any stage of the cultivation process. This false claim has been repeatedly posted on social media by opponents of the Project.

Assessment Outcome

The biodiversity matters raised in submissions have been comprehensively reviewed as part of this Submissions Response Report, including potential impacts relating to threatened species, wild kelp ecosystems, benthic habitat, biosecurity, biofouling, genetic interaction, cultivated kelp reproduction, shading effects and broader ecological interactions. Following this review, the Proponent remains satisfied that the biodiversity assessment presented in the EIS is appropriate and supported by the available evidence. The Project has been deliberately located away from rocky reef, seagrass and naturally occurring kelp habitats, within an area characterised by unconsolidated sandy sediments, and incorporates multiple mitigation measures including local provenance seedstock, harvest prior to reproductive maturity, biosecurity

controls, ongoing environmental monitoring and adaptive management, revised Biosecurity Plan, Biosecurity Risk Assessment, Knowledge Gaps and Uncertainty Register, and additional threatened-species assessments prepared in response to agency advice.

The additional assessment undertaken through this SRR has not identified any new impact pathway, scientific evidence or site-specific information that requires amendment to the biodiversity risk ratings presented in the EIS. The residual biodiversity risks remain consistent with the adopted National Ecologically Sustainable Development (ESD) risk assessment framework and the consequence and likelihood criteria applied throughout the EIS.

Accordingly, the residual biodiversity risk rating of Negligible, as assessed in the EIS Risk Register, remains unchanged. This rating reflects that, following implementation of the proposed avoidance, mitigation and management measures, impacts are not expected to be measurable at the scale of the relevant species, population, ecosystem or ecological community against natural background variability.

The Project is therefore considered unlikely to result in a significant adverse impact on biodiversity values, threatened species, ecological communities or the ecological function of Disaster Bay. Ongoing monitoring, reporting and adaptive management requirements will provide continued verification throughout operation of the Project.

4.6 Whale Entanglement

Description of the category

This category captures matters raised regarding the potential risk of entanglement of whales and other cetaceans (in particular Humpback Whale and Southern Right Whale) in longline infrastructure of the Project. Issues raised include the Project's proximity to the East Australian humpback migration corridor, the risk to resting females with calves, the consequences of any infrastructure lost during storms, the comparison between whale-protection standards applied to the Project and those imposed on commercial trap fishers, and acoustic and behavioural impacts.

Number of submissions in support: 0.

Number of submissions in objection: 70 (68 Public, 2 Organisation).

Number of submissions providing comment: 2 (Public).

Representative quotes — Objection

"One that really worries me is the impact on the whale migration. Disaster Bay is absolutely a resting place for whales especially when mothers and calves are on their way south." — Ian Williamson (Wonboyn, NSW)

"Eden1 in Disaster Bay abuts and includes a significant part of the humpback whale migratory route … The organisation 'Protecting Blue Corridors' … provides 31 years of data tracking whale migratory movements. Their interactive map clearly shows that Disaster Bay is within a 'blue corridor', a humpback whale migratory superhighway." — Dr Virginia Shepherd (Faulconbridge, NSW)

"The Department of Primary Industries is currently working actively with NSW Trap Fishermen to modify and upgrade the head gear used on their traps, specifically to reduce the risk of whale entanglement … The very same Department is now considering issuing a licence to a private aquaculture developer to install a far larger, far more extensive, and permanent network of submerged lines … the same standards … are not being applied to this private developer." — Michael Ballantyne, Licensed Fishing Business No. 450 (Greigs Flat, NSW)

"Up to 50000 whales use this waterway on their annual migration … The risk of entanglement far outweighs the potential benefits of this project." — Withheld (Boydtown, NSW)

"I am most concerned that whales may get tangled in the lines on their migration … If I cannot be reassured that there is almost no threat to the whales, then I will object to this proposal." — Anonymous (Kingston, ACT)

Agency review

Agency review by DPHI, DCCEEW, NPWS, and DPIRD Fisheries requested further information or modifications regarding whale entanglement. Responses to these matters are addressed in the following sections (click to view):

Section 5.13.4 Whale Entanglement

Section 5.13.18 Vessel Movements

Section 5.13.19 Concurrent Construction and Operation

Section 5.13.20 Risk Evaluation

RESPONSE

Auskelp acknowledges that whale protection is consistently raised across submissions by multiple objectors. The east Australian humpback, and recovering Southern Right Whale populations, are conservation successes that must be safeguarded.

Whale protection is one of Auskelp's primary objectives, and it has been treated as a foundational design constraint of the Project rather than a downstream mitigation issue. Auskelp recognises that entanglement in marine gear is the single greatest human-caused threat to whales and dolphins worldwide: the International Whaling Commission estimates that at least 300,000 cetaceans die as bycatch and entanglement in fishing gear each year, making it their single biggest threat, with entanglement identified as the greatest immediate threat to cetaceans globally (International Whaling Commission 2026) Link as follows: https://iwc.int/management-and-conservation/bycatch-and-entanglement-of-cetaceans-in-fishing.

Beyond entanglement, vessel collision is the other principal human-caused threat to large whales. Ship strikes are estimated to kill approximately 20,000 whales worldwide each year, with large species such as blue, humpback and grey whales most frequently affected, and collisions concentrated in busy commercial shipping lanes near major ports and along migratory routes (International Marine Mammal Project; Nautilus, 2026). The threat is driven overwhelmingly by large, fast commercial shipping, cruise and cargo traffic.

It is precisely because risks to whales are so significant — and because the recovering east-Australian humpback and Southern Right Whale populations are hard-won conservation successes — that the Project has been designed from the outset the way it has.

Whale Migration

Twelve cetacean species are recorded in the wider Disaster Bay area (EIS Section 7.10). The EIS acknowledges that the Project is in proximity to known migration routes for Humpback Whale and Southern Right Whale, and that it is possible the area may serve as resting or aggregation habitat (EIS Sections 9.4.4 and 9.4.6, Figures 59 and 60). Auskelp accepts the substance of the migratory-corridor travels along the eastern coast of Australia, including the reference to the World Wildlife Fund **(WWF)** *Protecting Blue Corridors* mapping referenced by some submitters. The Protecting Blue Corridors Mapping has been carefully reviewed and results are inconclusive for whale entry and resting inside Disaster Bay. The mapping and associated data clearly defines that risks to whales relate to five major categories, as follows:

1. ship strikes
2. entanglement in fishing gear
3. underwater noise
4. plastic pollution
5. climate change

All research and local experience indicates that Disaster Bay itself is not recognised as a whale resting area and the bay itself does not constitute a major migration pathway. Even so, the Project has been designed on the basis that whales can be present in Disaster Bay, and can regularly pass through it — not on the assumption that whales are absent.

It is relevant that WWF — a leading global whale-conservation body and the organisation behind the *Protecting Blue Corridors* whale-migration mapping — does not characterise seaweed cultivation as a

material entanglement threat to whales, and instead *actively supports* seaweed farming as a low-risk activity. WWF's published position states that numerous studies show seaweed farming has a low level of environmental risk, including entanglement, and draws an explicit distinction between slack lines in the water and seaweed farming infrastructure. Whereas any loose lines — such as a boat mooring or a crab-pot or fish cage buoy lines — can pose an entanglement threat. The lines used in seaweed aquaculture are fixed structures anchored securely to the seabed, that remain taut and under tension – and that maintaining taut lines is a standard best practice that history and studies suggest may help prevent entanglements. WWF further confirms that while entanglement remains a low-likelihood residual concern to be managed through siting and design, there have been no documented marine entanglements associated with seaweed farms in 40 years. Best practice includes siting away from core marine-mammal pathways, and keeping ropes taut. This strategy is consistent with the Project's current location, tensioned, sub-surface longline design, and the management measures set out in the project infrastructure design and the Marine Fauna Interaction Plan.

Principle whale-entanglement threats identified by WWF and the *Protecting Blue Corridors* initiative — commercial shipping, commercial fishing gear and shark nets — are activities the Project does not introduce. For more information, WWF source links are provided, as follows:

- "How Seaweed Farms Protect Marine Wildlife" (WWF, worldwildlife.org): https://www.worldwildlife.org/pages/seaweed-farming-avoiding-the-potential-risk-of-entanglement
- "Farmed seaweed" (WWF, worldwildlife.org): https://www.worldwildlife.org/our-work/oceans/sustainable-seafood/farmed-seafood/farmed-seaweed/

The WWF specifically states the following: “Numerous studies show that seaweed farming has a low level of environmental risk, including entanglement.”

It is important to clarify that many submissions characterised Disaster Bay as a recognised whale resting, aggregation or calving area – this is incorrect. The recognised whale aggregation site on this stretch of the NSW far south coast is Twofold Bay, located approximately 25 km north of Disaster Bay. This distinction is significant, well documented in available scientific literature, and fact is a cornerstone driver of the Project's current site selection.

Twofold Bay is recognised as a significant whale watching area, with the following ecological features: deep, protected waters (and widely described as the third-deepest natural harbour in the southern hemisphere); minimal swell depending on wave direction; and a long history of cetacean usage including historical whaling observations and contemporary whale-watching activity (EIS Section 9.4.7). Twofold Bay is a recognised humpback whale aggregation and premier whale-watching area on the NSW far south coast, where humpbacks — including females with calves on the southward migration — regularly enter the bay to rest and feed (McGovern et al., 2025).

On current evidence, Disaster Bay is not located within the core migratory corridor used by whales along the east coast (EIS Sections 2.2.2.7 and 9.4.7). Disaster Bay is a broad opening, exposed, high-energy embayment that possibly lacks the calm, protected features necessary for frequent whale resting or aggregation. While whales are certainly observed passing offshore of Disaster Bay during migration, the bay itself is not recognised in any available literature as a significant congregation, resting, or calving zone (EIS Section 9.4.7). The recognised migration path along this stretch of coast runs offshore of Disaster Bay, not through the bay — possibly a function of bathymetry, swell exposure, and the established site-fidelity of east Australian humpback populations.

Humpback whales exhibit structured migratory behaviour, with migration routes and habitat use influenced by learned behaviour, population traditions and environmental conditions (Baker et al., 2013). Along the east Australian coast, migrating humpback whales use a broad coastal corridor, with certain sheltered coastal areas providing important resting and social habitats, particularly for females with calves (Noad et al., 2011; Bruce et al., 2014; McGovern et al., 2025). These movement patterns are not random; whales demonstrate repeated use of suitable coastal habitats where environmental conditions support resting and migration behaviours. Recent observations from Twofold Bay further demonstrate recurring use of sheltered waters by humpback whale mother–calf groups during migration (McGovern et al., 2025).

Further details on whale migration paths (as requested by DPHI) can be found in Section 5.13.4 Item 4 – Whale Entanglement, including indicative whale migration paths.

This is one of the many factors that Disaster Bay was selected as the Project site — not Twofold Bay. The site-selection process documented in the EIS (Sections 3.5 and 3.6, and the MWSAS Constraints Criteria at EIS Table 1) specifically prioritised siting outside recognised whale aggregation and resting areas. Locating the Project in Disaster Bay rather than in or adjacent to Twofold Bay was a deliberate decision to reduce, not increase, interaction risk with migrating and resting cetaceans.

Auskelp acknowledges that whales can pass through Disaster Bay during migration, and the design and operational measures have been adopted on that basis. More details on whale migration paths (as requested by DPHI) can be found in Section 5.13.4 Item 4 – Whale Entanglement, including indicative whale migration paths.

Whale Entanglements in NSW

Whale entanglements are regularly reported along the eastern Australian seaboard, including within New South Wales coastal waters. Recent reports indicate 45–50 reported humpback whale entanglements per year along the east coast of Australia — a figure that has risen broadly in line with the recovery of the east-Australian humpback population — predominantly associated with set commercial fishing gear, ropes, floats and pot lines, shark-meshing nets and drumlines, and marine debris (Schilling et al., 2023). There is no single official national entanglement database; reported figures are compiled from rescue-agency, research and public records.

Schilling et al. (2023) examined humpback whale entanglements in set demersal fish-trap gear off New South Wales and found that the strength and position of the East Australian Current (EAC) influenced entanglement likelihood. Risk was greatest in northern New South Wales (≈30.3°S) between July and October, when the EAC runs close to the coast, whereas no oceanographic association with entanglement risk was detected in the EAC separation zone further south (≈33.8°S); risk was also reduced in years following strongly negative Southern Oscillation Index (El Niño) conditions. The Eden-1 lease lies on the far south coast, well to the south of both study areas, in waters where the EAC has separated from the coast and where the localised current behaviour within Disaster Bay further reduces the likelihood of whales tracking directly through the embayment (refer Section 4.6 and EIS Section 9.4.7).

Notwithstanding the regular occurrence of whale entanglements arising from these existing marine uses, a review of available incident records, published literature and aquaculture case studies has not identified any documented whale entanglement associated with seaweed (macroalgae) cultivation longlines, in Australia or internationally (Stekoll et al., 2025; ICES, 2023). Auskelp notes that whale entanglements have been recorded in other aquaculture sectors internationally — principally finfish (salmon) and mussel farming in Chile, British Columbia and New Zealand — but that these incidents are predominantly associated with slack anchor and mooring lines, looped lines, net pens and support structures, rather than with the taut, sub-surface tensioned cultivation longlines proposed for the Project. Auskelp further acknowledges that the absence of recorded entanglement events to date should not be construed as an absolute exclusion of risk.

The proposed cultivation system duly comprises taut, sub-surface longlines maintained under tension, with cultivation droppers suspended vertically (not looped) within discrete one-hectare modules, differing substantially from the slack, buoyant lines and pot ropes more commonly implicated in entanglement incidents. As stated, while the potential for marine fauna interactions cannot be excluded, the Project's infrastructure configuration, sub-surface deployment, modular arrangement and adaptive environmental management framework are expected to minimise the likelihood of whale entanglement.

Marine Fauna Interaction Plan

As stated by the WWF, “because absence of evidence does not necessarily equate to absence of risk”, the Marine Fauna Interaction Plan (Appendix RC1) was prepared with reference to cetacean interactions and was reviewed by DCCEEW as part of the EPBC referral process. DCCEEW's review formed part of the basis for the "not a controlled action" determination of 20 June 2025 (EPBC 2025/10149), with DCCEEW satisfied that the Project's marine fauna mitigation measures, taken together with the site location and tensioned

longlines and screw anchors at the Project site showing a low risk of entanglement, were sufficient to conclude that no significant impact on Matters of National Environmental Significance was likely.

Design measures to reduce entanglement risk

The longline infrastructure has been designed to minimise entanglement risk. Taut, tensioned, sub-surface mainlines; minimal surface presence; vertical drop lines with no loops, suspended from sub-surface mainlines with specified rope diameters and tensioning; helical screw anchors rather than dragging moorings; fixed-position infrastructure; and no netting of fishing gear of any kind. This taut-line longline configuration is the configuration recognised internationally as presenting the lowest entanglement risk for marine mammals among offshore aquaculture options. Longline aquaculture has been practised in Twofold Bay, Jervis Bay and Port Stephens for approximately four decades, in waters that include the same migratory patterns the proposed Project will operate, with no recorded entanglement incidents involving cetaceans (EIS Section 9.4.4).

Comparison with trap fisher gear modifications

Michael Ballantyne (commercial fisher) raised a comparison between the gear-modification requirements imposed on NSW trap fishers and the controls applied to the Project. Auskelp responds as follows: the trap fishery gear-modification program (led by DPIRD Fisheries) is a response to documented entanglement events involving the surface buoys, slack vertical ropes, and surface-connected rope catenaries characteristic of trap and pot fisheries. Those gear types — opportunistic seabed deployments connected to the surface by long slack vertical rope, deployed individually across the migratory corridor — are the configurations most strongly associated with cetacean entanglement globally. The longline kelp infrastructure proposed by the Project is not that configuration. It is taut, sub-surface, fixed-position, with no slack vertical rope catenary, no individually buoyed surface-connected trap, and no operational pattern of repeated baiting and retrieval. The regulatory framework is internally consistent: the trap fishery is being required to modify its gear toward lower-entanglement configurations; the Project starts from that baseline. Auskelp welcomes any condition that requires equivalent or higher standards of whale-protection performance and reporting to those now being applied across the NSW fishing sector.

Revisions to the Marine Fauna Interaction Plan and Emergency Response Plan

In response to advice from NPWS and DPIRD Fisheries, the Marine Fauna Interaction Plan (Appendix RC1) has been revised to include: an explicit response protocol for the entanglement of large whales (greater than 6 m), under which the animal is monitored from a safe distance; NPWS is notified; trained observers are required on vessels during deployment activities; explicit night-time operating procedures with deployment activity outside daylight hours minimised wherever practicable; actions consistent with the NSW Marine Waters Sustainable Aquaculture Strategy; and adoption of the *Code of Practice for Injured, Sick and Orphaned Marine Mammals* (DPE, 2022) as primary references. The Emergency Response Plan (Appendix RC2) has been updated to recognise NPWS as a relevant authority for whale collision or marine wildlife entanglement or interaction events, reflecting NPWS's statutory responsibility for marine wildlife events within NSW waters.

Infrastructure performance and resilience

Several submissions, including Dr Shepherd's, refer to a local report that the Auskelp test site lost buoys during a recent storm. Auskelp is not aware of any lost buoys from its kelp test site. Across more than two years of continuous offshore testing in the high-energy waters of Disaster Bay — including through repeated severe weather events and storm swells — the test infrastructure has performed as expected, with no weather induced losses of infrastructure, kelp or kelp lines to the marine environment, no detached components recovered from beaches, and no recorded incidents of marine debris generated from the test program. This operational record is documented across the FY23 to FY25 Annual Reports and consistent with the Auskelp test program detailed in Appendix RB5 Eden-1 Technical Testing and Development Report.

The performance of the test program provides an empirical basis for assessing the engineering profile of the proposed Project infrastructure (EIS Sections 4.11 and 9.1.1). In addition, the Project is governed by multiple management plans related to infrastructure-related debris and beach-cast monitoring at Greenglades Beach (EIS Table 21, Mitigation Measures BI1). In the event of any marine entanglements or negative mammal

incidents are recorded in the future, the Proponent agrees that a Marine Fauna Management Committee may be established, if determined by DPIRD Fisheries.

Statutory framework and EPBC outcome

The Project is subject to the *Biodiversity Conservation Act 2016* (NSW), the *Fisheries Management Act 1994* (NSW), and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). On 20 June 2025, DCCEEW formally determined the Project is **not a controlled action** under section 75 of the EPBC Act (EPBC 2025/10149) – meaning it is not likely to have a significant impact on any Matter of National Environmental Significance, including listed migratory cetaceans such as the Humpback Whale and Southern Right Whale, and that no further assessment or approval under the EPBC Act is required (EIS Section 7.13).

Acoustic and behavioural impacts

Acoustic and behavioural impacts on cetaceans are addressed at EIS Sections 9.4.5 and 9.4.7. Vessel activity is limited to 0-3 return trips per day during routine operations, with higher activity only during deployment and harvesting; vessels operate predominantly during daylight hours and at low cruising speeds (under 15 knots); helical screw anchor installation avoids pile-driving; and the Project does not involve dredging, blasting or percussive seabed activity (refer Section 4.10). Slow-down protocols apply in sensitive areas and during the migration period (June–November), and construction is to avoid the migration season where reasonably practicable. No acoustic impacts on cetaceans are expected related to the Project.

Assessment Outcome

Whale protection has been assessed as a central design and operational issue for the Project. The assessment recognises that Humpback Whales, Southern Right Whales and other cetaceans may occur in or near Disaster Bay during migration; however, Disaster Bay is not identified as a recognised whale aggregation, resting or calving area. The EIS assessed the risk of whale entanglement and broader cetacean interaction as low, based on site selection, infrastructure design, operational controls and proposed mitigation measures. Following detailed consideration of public submissions, agency advice, additional literature review and updates to the Marine Fauna Interaction Plan and Emergency Response Plan, no new evidence has been identified that alters the original EIS risk assessment or changes the overall risk profile.

The Project does not introduce the gear types most commonly associated with whale entanglement, such as nets, shark meshing, pot lines, trap ropes, slack buoy lines or commercial fishing gear or uses vessels that increase the risk of vessel strike. Instead, the infrastructure comprises taut, tensioned, sub-surface longlines, fixed screw anchors, vertical droppers without loops, minimal surface infrastructure and no fishing apparatus. This design materially distinguishes the Project from the known causes of whale entanglement in NSW and internationally.

The assessment is further supported by the absence of identified whale entanglement events associated with seaweed cultivation longlines globally and DCCEEW's EPBC "not a controlled action" determination. Additional measures adopted through the revised Marine Fauna Interaction Plan, Emergency Response Plan, NPWS protocols, trained observers, inspection requirements and adaptive management framework further reduce residual risk.

4.7 Water Quality

Description of the category

This category captures matters raised regarding the potential impacts of the Project on marine water quality in Disaster Bay, including nutrient loading, dissolved oxygen, turbidity, chemical or biological contamination, and the appropriateness of the monitoring program. The category also addresses the agency advice received from DPIRD Fisheries regarding seasonal water quality and benthic sampling.

Number of submissions in support: 8 (8 Public).

Number of submissions in objection: 39 (39 Public).

Number of submissions providing comment: 1 (Public).

Representative quotes — Support

"Kelp aquaculture is globally recognised as one of the most sustainable forms of ocean farming, requiring no freshwater, fertiliser, feed, or arable land." — Anna Cooke (Pambula, NSW)

Representative quotes — Objection

"Other places were rejected as those sites were polluted with agricultural runoff or nutrient loading. Thus, Disaster Bay has been targeted for the precise reason that it is a pristine area." — Margaret Grose (Melbourne, Victoria)

"Large-scale kelp farms have the potential to alter water flow, reduce sunlight penetration, and disrupt existing habitats." — Ciara Maher (Eden, NSW)

"It can change the nutrient balance of the nearby water system which will have a negative impact on businesses down the river." – Kate Johnston (Wonboyn, NSW)

RESPONSE

The technical basis for assessing the water quality impact of kelp aquaculture is that the operation has no inputs and no waste. Unlike finfish aquaculture, kelp cultivation involves no feeding regime, no excretion of nutrient-rich waste into the water column, no fish-meal or fish-oil input, no antibiotics, no chemicals, no hormones, and no veterinary inputs of any kind (EIS Sections 1.2 and 4.8). Unlike mussel and oyster aquaculture, kelp does not filter particulate matter from the water column.

Kelp is an autotrophic organism. It draws nutrients (nitrogen, phosphorus, dissolved inorganic carbon) directly from seawater via photosynthesis. The cultivation of kelp therefore acts as a nutrient sink, not a nutrient source — removing dissolved nutrients from the water column and converting them to biomass that is harvested and removed from the marine environment. This is the basis on which kelp aquaculture is recognised internationally as a regenerative aquaculture activity capable of improving rather than degrading water quality, particularly in nutrient-enriched coastal waters (Theuerkauf et al., 2019; FAO, 2021). In the offshore, low-baseline-nutrient setting of Disaster Bay, the net effect is small in absolute terms but unambiguously in the direction of water quality improvement, not degradation.

The 30-year nutrient modelling undertaken by Stegeman 2024 (EIS Appendix A4) — drawing on long-term oceanographic and biogeochemical data for the region — confirms that the cultivated kelp biomass at the 200 ha scale of the Project represents a small fraction of natural primary productivity in the surrounding water column and does not give rise to localised oxygen depletion, eutrophic conditions, harmful algal bloom triggers, or measurable changes to ambient nutrient concentrations beyond natural seasonal variation (EIS Sections 7.4–7.8 and 9.4.1).

<u>Water Quality</u>

The Project introduces no water-quality stressors, generates no effluent, and has no waste stream.

Notwithstanding that position, Auskelp recognises:

- the value of community confidence in independent operational data, particularly in a sensitive marine setting;
- the baseline-establishment value of seasonal data, which provides reference points against which any future change (from any source — climate, EAC shifts, terrestrial run-off, or unrelated regional pressures) can be measured.

<u>Risk assessment outcome</u>

Water quality matters are addressed at EIS Sections 7.4 to 7.8 and 9.4.1, with mitigation set out in Risk Table 15. The combination of the autotrophic nature of kelp; the absence of any feed, chemical, fertiliser, antibiotic or veterinary input; the 30-year nutrient modelling outcome; comparable longline experience in adjacent NSW waters; and the precautionary monitoring program supports a finding that water quality impacts are negligible as detailed in the EIS and can be appropriately monitored and managed.

4.8 Microplastics and Marine Debris

Description of the category

This category captures matters raised regarding the potential for the Project to generate microplastic pollution or marine debris. Issues raised include concerns about the potential shedding of microplastics from synthetic ropes, buoys and longline components; the potential loss of infrastructure during severe weather events resulting in debris washing ashore at Disaster Bay, Greenglades Beach or Wonboyn Beach; and concerns that cultivated kelp could detach and accumulate on beaches in significant volumes. The category also addresses claims, including photographic material provided in submissions, that beach-cast kelp currently observed on local beaches originated from the Auskelp test farm; potential impacts associated with beach debris management on sensitive coastal environments and shorebird habitat, including the critically endangered Hooded Plover; and the adequacy of monitoring, retrieval and clean-up arrangements should any Project-related material reach the shoreline.

Number of submissions in support: 0.

Number of submissions in objection: 82 (81 Public, 1 Organisation).

Number of submissions providing comment: 2 (Public).

Representative quotes — Objection

"If only a small portion of the 1000s tonnes of kelp from the farm comes free and or part of the infrastructure, what a mess that will make on the beaches." — Ian Williamson (Wonboyn, NSW)

"The risk of 12,000+ plastic floats and 500+ km of synthetic rope washing up on the beaches of Disaster Bay is incredibly high … I have attached photos I took on the 18th of April 2025 showing the magnitude of kelp washed up on the beach." — James Ross (Malvern East, Vic)

"Additionally, with kelp washing ashore in constant volumes, iconic beaches like Greenglades could become unswimmable and unusable, permanently altering the character of the area." — Anonymous (Wonboyn, NSW)

"It also claims there will be no pollution from the infrastructure but it is widely recognised that synthetic ropes and the other materials such as plastic buoys shed microplastics into marine environments, with long term damaging consequences." — Dr Toni Roberts (Hampton, Vic)

"The kelp farm will greatly increase the amount of kelp washed up on the shore of Disaster Bay and will affect the local population of the critically endangered Hooded Plover." — Anonymous (Murrumbeena, Vic)

RESPONSE

The Proponent recognises the concerns of submissions relating to microplastics and marine debris, including kelp potentially washing up on local beaches related to the Project.

<u>Microplastics</u>

Microplastics are plastic particles smaller than five millimetres in size. They are generally divided into two categories by origin. Primary microplastics are particles that enter the environment already at microscopic scale — for example, fibres shed from synthetic clothing during washing, particles abraded from vehicle tyres on roads, and industrial plastic pellets. Secondary microplastics are formed when larger plastic items progressively fragment in the environment through ultraviolet exposure, weathering and mechanical wear. Once present in a waterway, microplastic particles of either type cannot be biologically broken down or removed; they persist and either settle into sediments or are physically transported on tides and currents.

The global evidence base is clear that the microplastic load reaching the marine environment is overwhelmingly land-based in origin. The most widely cited international source-apportionment study — the IUCN's *Primary Microplastics in the Oceans: A Global Evaluation of Sources* (Boucher and Friot, 2017) — found that 98% of primary microplastic emissions to the world's oceans are generated by land-based activities, with all marine activities combined contributing only 2% with commercial and recreational fishing and boating being the primary contributors.

Within the land-based total, the laundering of synthetic textiles (35%) and the abrasion of vehicle tyres (28%) together account for almost two-thirds of global primary microplastic loading to the marine environment, with city dust (24%) and road usage (7%) making up most of the remainder. The dominant delivery pathways are road runoff (66% of releases) and discharge from wastewater treatment systems (25%) — pathways that operate through inshore catchments and estuarine systems before reaching open marine waters.

Auskelp acknowledges the concern raised by submitters regarding microplastic shedding from synthetic ropes and floats related to the Project.

The Project is not a significant source of microplastics but even so, minimises microplastics in the following manner:

- **Material selection** — marine-grade polypropylene mainlines, dropper ropes and buoyancy floats specified for offshore aquaculture;
- **Infrastructure design** — taut, fixed-position longline configuration with minimal abrasion between components, in contrast to fishing related microplastic shedding, or slack-line aquaculture configurations that experience higher mechanical wear;
- **Routine inspection and replacement** — scheduled inspection of all infrastructure components for wear and degradation, with replacement of any line, rope or float showing signs of UV breakdown or mechanical degradation, as set out in the Environmental Management Plan and Monitoring and Maintenance Plan;
- **Third-party audit** — Table 18, RE2 third-party environmental audit every three years covering benthic habitat, which encompass marine debris baseline reporting in the sediment below the Project area.

Overall, the microplastic risk profile of the offshore Project is substantially lower than that of comparable inshore aquaculture operations, and is well below established regulatory monitoring thresholds. This conclusion is directly supported by the NSW Environment Protection Authority's *Broadscale microplastic assessment of NSW estuaries* technical report (NSW EPA, 2026), provided at Appendix RD1, which provides the most comprehensive spatial assessment of microplastic contamination undertaken in Australian coastal waters. The EPA report establishes the statewide baseline against which the Project's risk profile can be objectively benchmarked, and its findings reinforce the low risk conclusion reached in the EIS. The EPA report's central physical finding is that microplastic concentration in any waterway is governed by two hydrodynamic features: internal dilution capacity (the ratio of receiving basin volume to incoming runoff) and flushing rate (the inverse of residence time). Microplastics enter coastal systems from many diffuse sources — atmospheric deposition, stormwater, terrestrial runoff, recreational vessel activity, urban litter, and the in-situ degradation of any plastic material in the water column. Once present, those particles cannot be biologically removed. The only mechanism by which microplastics are exported from a coastal waterway is ocean exchange — that is, physical transport, on tides and currents, from the inshore system into the open ocean, where they are dispersed across a much larger volume of water. Semi-enclosed estuarine systems with restricted entrances, long residence times, and low flushing rates therefore act as accumulating sinks for microplastics, while permanently open, well-flushed, high-energy ocean settings act as the diluting receiving environment.

The EPA data for Wonboyn River illustrates this principle directly. Wonboyn River was sampled as part of the EPA's statewide program and assigned a catchment disturbance rating of "very low" — that is, the catchment delivering water to the system has effectively no urban, industrial or significant agricultural pressure, and the catchment-derived microplastic load entering the system is among the lowest in the State. Notwithstanding that near-pristine catchment, Wonboyn River recorded a median microplastic concentration of 0.21 MP/m^3 across four tows, a maximum reading of 1.19 MP/m^3 (approaching the Grade D threshold of 1.3 MP/m^3), and was assigned an overall Grade B (NSW EPA, 2026, Appendix RD1, Table 1, ranked 29 of 120 statewide). This is the central evidential point. Microplastics are accumulating in the Wonboyn system not because there is a substantial source within its catchment — the EPA's own classification confirms there is not — but because the enclosed morphology of the Wonboyn estuary restricts the rate at which the system can export microplastic load to the ocean. Whatever microplastic is delivered to Wonboyn — by atmospheric deposition, by minor catchment inputs, by the existing oyster aquaculture industry, by recreational vessel activity, or by any other

diffuse source — must, in order to leave the system, ultimately be flushed seaward into the open ocean of Disaster Bay.

Consistent with the EPA's findings, the established Wonboyn Lake oyster aquaculture industry — which operates in a higher-retention estuarine system than the Project site — has operated successfully for decades without identification as a meaningful microplastic source. The Project's offshore location, high flushing rate, and engineered low-shedding material specification together produce a microplastic risk profile that is materially lower than that of inshore aquaculture systems already operating in the same locality, and that is consistent with — indeed, sits at the lowest end of — the baseline now established for NSW coastal waters by the NSW EPA.

Kelp on beaches from kelp Farm

Auskelp acknowledges the concerns of submitters that excess kelp will be deposited on beaches related to the Project. Several submitters — including James Ross, who provided a photographs taken on 18 April 2025 (image attached as Figure 5 below)— have asserted that beach-cast kelp currently observed on the beaches of Disaster Bay is, or may be, derived from the Auskelp test kelp farm operating offshore from Greenglades Beach. This claim is incorrect, and Auskelp respectfully sets out the evidence below.

Figure 5: Photograph of beach-cast kelp on Greenglades beach 18 April 2025, via submission from James Ross.

Auskelp confirms the substantial beach-cast kelp deposits photographed above are certainly wild kelp dislodged from natural rocky reef populations after storm events – a normal and ongoing process – not kelp derived from the Auskelp test farm. This ongoing clarification has been made by Auskelp in Frequently Asked Questions (FAQ-1 and FAQ-2) documents and during community consultation meetings.

It is understandable that people may feel these beach-cast deposits are related to the test farm, however the supporting evidence is direct and unambiguous:

1. In April of each year – the beginning of the farming season – the test farm has very limited cultivated biomass (See Figure 6 – Auskelp seeded lines April 2026). Kelp lines at that time of year typically carry kelp blades less than 1 cm in length.
2. Morphological identification of the beach-cast material – "**holdfast and stipe test**". Wild *Ecklonia radiata* attaches to rocky substrate have a generally long stem (to reach up to the light) and a robust holdfast structure with broad, strong legs (technically a haptera/rhizoid mass) that grips rocks and reef. When wild kelp is dislodged in storm conditions, it tears free often with the holdfast intact, frequently with rocks or reef fragments still embedded in the holdfast tissue. Examples can be seen in Figures 7, 9, 10 & 11).
3. Cultivated *Ecklonia radiata*, by contrast, is grown on twine wrapped around 12 mm diameter longline rope – it develops a comparatively small and narrow holdfast that attaches to the rope (see Figure 8 & 12), and the kelp has a relatively short stipe compared to its length.

Auskelp has been seeding, weighing, monitoring and photographing kelp lines for multiple years. This continuous program has generated a documented evidence base – referred to in FY24 and FY25 Annual Reports (available at www.auskelp.net) and detailed in Appendix RB5 Eden-1 Technical Testing and Development Report – demonstrating that *Ecklonia radiata* is highly storm-resilient in the proposed longline configuration. No evidence has been discovered that intact kelp biomass has been lost from the longlines during the seasonal grow-out periods and R&D testing, including through repeated severe weather events, East Coast Lows, and sustained high-energy wave conditions characteristic of the open ocean environment of Disaster Bay. This operational record is consistent with the EIS finding that farmed *Ecklonia radiata* exhibits low drag, neutral buoyancy and high residual strength (EIS Section 4.11), that the kelp cannot reach its stipe breaking force in the current Project configuration, and this combined evidence – drawn from continuous in-situ measurement – forms the basis for the conclusion that the proposed Project infrastructure operates within design tolerances presented.

Figure 6: Auskelp *Ecklonia radiata* seeded line 9 April 2026, less than 1 cm long kelp blades, (Credit: Auskelp 2026)

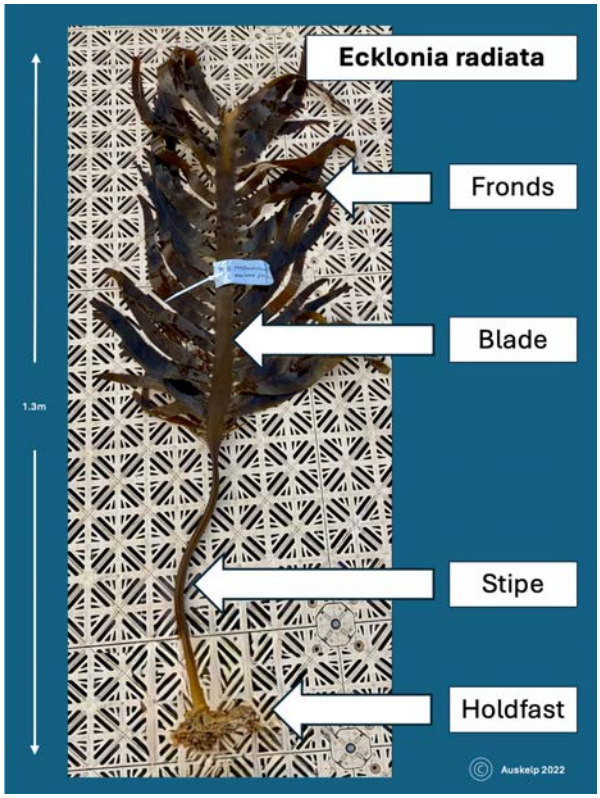

Figure 7: Morphology of wild *Ecklonia radiata* (Credit: Auskelp 2022).
Figure 8: Cultivated *Ecklonia radiata* (Credit: Auskelp 2024).

Figure 9: Stormcast Kelp on Greenglades Beach 9 April 2026, including *Ecklonia radiata*, *Phyllospora comosa* (crayweed) and *Durvillaea* (Credit: Auskelp 2026).

Figure 10: Wild *Ecklonia radiata* typical holdfast (stormcast), Disaster Bay 2026 (Credit: Auskelp 2026).

Figure 11: Wild *Ecklonia radiata* typical holdfast (stormcast), Disaster Bay 2026 (Credit: Auskelp 2026).

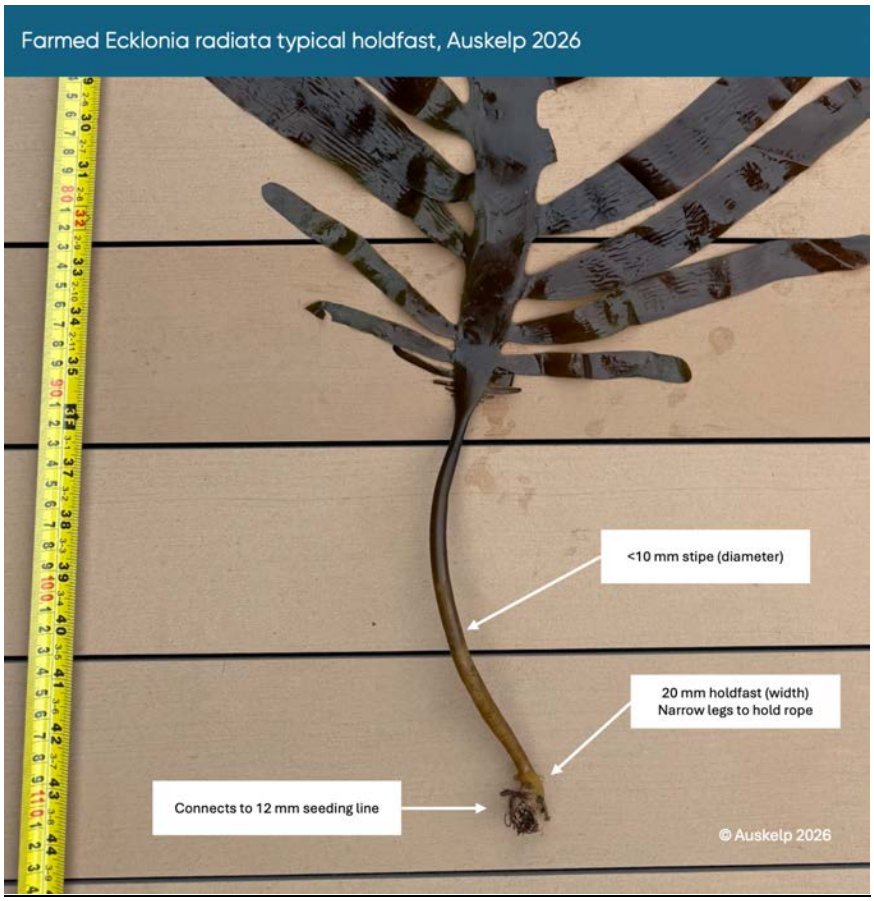

Figure 12: Farmed *Ecklonia radiata* typical holdfast (stormcast) >500 days old, Disaster Bay 2026 (Credit: Auskelp 2026).

Beach-cast kelp (wrack)

The presence of beach-cast wild kelp on the beaches of Disaster Bay and the broader NSW far south coast is not an anomaly. It is a long-established, ecologically critical natural process known as *wrack deposition*. Detrital wild kelp is exported from offshore rocky reef kelp forests to adjacent sandy beach ecosystems by storm action and ocean currents:

- Wrack is a "spatial subsidy" that shapes the entire functioning of sandy beach ecosystems, providing the trophic foundation of beach food webs that would otherwise have very limited in-situ primary productivity (Spiller et al., 2010; Huggett et al., 2021, *Frontiers in Marine Science*).
- Kelp-derived wrack supports beach amphipods, polychaetes, kelp flies, isopods and other beach invertebrates which in turn support fish in the surf zone and shorebirds on the beach (Dugan et al., 2003; Hyndes et al., 2014).
- Critically, this same ecosystem service supports the shorebird species — including the critically endangered Hooded Plover (*Thinornis cucullatus*) — whose conservation status submitters have rightly raised. Beach wrack is one of the primary food sources sustaining beach invertebrate prey populations on which Hooded Plovers depend (Dugan et al., 2003; Schlacher et al., 2015). Wrack on the beach is not in opposition to Hooded Plover conservation; in functional ecology terms, it is part of the foundation that supports it.
- Beach wrack supply is closely linked to the condition and productivity of adjacent kelp forest ecosystems. Recent research demonstrates that nearshore kelp canopy biomass is a key driver influencing the delivery of kelp-derived organic material to sandy beach ecosystems, highlighting the ecological connectivity between subtidal kelp forests and adjacent coastal food webs (Emery et al., 2025). These findings are consistent with broader research demonstrating that detached

> macroalgal material represents an important cross-ecosystem subsidy supporting beach invertebrate communities and higher trophic levels (Dugan et al., 2003; Hyndes et al., 2014)

The implication is direct: beach-cast wild kelp on Disaster Bay beaches is a sign of a functioning natural ecosystem, and it is most likely considerably less abundant today than it was historically, due to the broader decline of wild kelp forests.

The Project's contribution to beach-cast deposition is, on the evidence of the test program and the engineering profile of the proposed infrastructure, negligible. The Project does not divert, intercept, or otherwise alter the flow of wild kelp wrack into the beach ecosystem. Importantly, it testing concludes it does not introduce a significant competing supply of farmed kelp into beach-cast deposits at a scale capable of altering wrack supply or composition. The dominant signal in beach-cast deposits at Disaster Bay is, and will remain, wild kelp from the rocky reef forests that occur on the perimeter of the bay (EIS Section 4.9).

Auskelp confirms the substantial beach-cast kelp deposits photographed by James Ross in 2025 (and as documented by Auskelp again one year later in April 2026), and described on local beaches in other submission responses, are wild kelp dislodged from natural rocky reef populations after storm events, not kelp derived from the Auskelp test farm. Even so, Auskelp has agreed to monitor kelp deposits post significant storm events as per the Environmental Management Plan (Appendix RC4, Section 2.22 and Table 18) to ensure that kelp deposits are not derived from farming operations – these results will be reported to DPIRD Fisheries on an ongoing basis.

Infrastructure loss

The Proponent acknowledges the concerns of submitters that ropes and buoys could be lost during significant storm events. The Project infrastructure has been engineered to withstand the anticipated storm conditions at the site, with the design informed by long-term Eden Waverider Buoy wave-climate data (1978–2024), as detailed in EIS Sections 4.11, 9.1.1 and 9.2.3. The engineering assessment is complemented by the empirical record from the open-ocean test program. Across more than three years of continuous offshore testing in the high-energy waters of Twofold Bay and Disaster Bay (Test Locations #1 and #2; see Figure 13) through repeated severe weather events, East Coast Lows and sustained storm swells, the test infrastructure performed as designed, with no loss of infrastructure. This record is documented in the FY23 to FY25 Annual Reports (available at www.auskelp.net) and Appendix RB5 – Eden-1 Technical Testing and Development Plan. These findings are further supported by more than three years of seeding, weighing, photographic and biomass monitoring of cultivated lines across a range of canopy densities.

Ecklonia radiata grown on longlines in Disaster Bay have exhibited low drag, neutral buoyancy and high residual strength (EIS Section 4.11). The cultivated crop has proven to transmit little additional hydrodynamic load to the structure even at full canopy. Project dropper lines hang vertically from a tensioned backbone positioned approximately 1 m below the water surface, beneath the zone of maximum wave orbital energy. The infrastructure has been designed against a biomass loading assumption of 30 kg/m, against an actual harvest loading of approximately 5 kg/m. The hydrodynamic forces that a vertical dropper line can transmit under storm loading are well below both the breaking strain of the kelp's attachment and the working load limit of the line itself; in practice the kelp cannot generate sufficient load to part the line, and the line cannot generate sufficient load to strip the kelp. The system is, by design and by demonstrated performance, well within tolerance under realistic operational conditions.

On the combined weight of the engineered design profile, the multi-year test record without infrastructure loss, and the physical loading characteristics described above, the risk of a well-maintained, correctly tensioned kelp line failing as a result of storm effects is possible but is assessed as low. The principal residual pathway to infrastructure dislodgement is therefore not storm loading but third-party interaction — most plausibly an unauthorised or errant vessel transiting the lease and contacting a backbone or mooring. Even in that event, the consequence is constrained by the modular, dual-anchored design: each 100 m backbone is independently secured by a separate screw anchor at both the seaward and shoreward ends, so a line that is struck and partially dislodged would most likely remain anchored at one end rather than being lost to the marine environment as free-floating debris, allowing recovery under the gear-recovery protocol in the EMP. Such an event is not impossible, but still represents a low-consequence residual risk that is actively

managed through the Notice to Mariners regime, post-storm inspections, debris recovery, and beach-cast monitoring framework set out in the EMP and ERP (Mitigation Measure BI1 – Table 18).

Figure 13: Kelp Aquaculture test locations #1 Twofold Bay and # 2 Disaster Bay. Test locations not to scale. (Source: Google).

Hooded Plover and shorebird habitat

The critically endangered Hooded Plover (*Thinornis cucullatus*) is addressed in the broader threatened species assessment within the EIS at Section 7.11. The species is dependent on undisturbed sandy beach habitat with adequate invertebrate prey populations, which are themselves dependent on the wrack input described above. The Project does not introduce any new disturbance to the beach habitat (no land-based footprint; no shore access via Nadgee Nature Reserve; no shore-based infrastructure within the Wonboyn locality – refer Section 4.4). The Project also does not reduce wrack input to the beach ecosystem; on the broader timeframe, projects of this category support the cultivation and propagation science required for the long-term resilience of wild kelp forest, the source of the wrack on which the species partly depends.

Assessment Outcome

Microplastics and marine debris matters are addressed at EIS Sections 7.4 and 9.4.1, with mitigation set out in Risk Tables 15 and 22, and within Table 18 Mitigation Measures CE3 RE1, CE3 RE3 and BI1. The combination of (a) the correction of the factual record regarding beach-cast kelp origin; (b) the recognition of wrack as a natural and declining ecological process supporting the beach ecosystem; (c) the marine-grade material specification and design profile of the infrastructure; (d) the inspection, replacement and monitoring framework documented in the EMP; (e) the audit cycle; and (f) the NPWS and DPIRD Fisheries notification protocols incorporated into the revised ERP – supports a finding that microplastics and marine debris impacts have been comprehensively assessed

The Project is not considered a significant source of microplastics or marine debris. The offshore location, high-energy and highly flushed marine environment, use of marine-grade materials, fixed tensioned infrastructure design, inspection regime and replacement protocols substantially reduce the potential for material degradation or accumulation.

Concerns regarding cultivated kelp washing ashore have been assessed against the multi-year test program, and photographic monitoring and biological characteristics of farmed versus wild *Ecklonia radiata*. The evidence demonstrates that existing beach-cast kelp deposits at Disaster Bay are derived from natural rocky reef kelp forests and storm-driven wrack processes, not the Auskelp test farm. Beach wrack is recognised as a natural and ecologically important process that supports sandy beach ecosystems, including invertebrate communities relied upon by shorebirds such as the Hooded Plover.

Infrastructure failure risk remains assessed as low based on engineered design tolerances and more than three years of offshore testing in Twofold Bay and Disaster Bay, including severe storm conditions, with no loss of infrastructure, kelp lines or farm-generated debris. Residual risks associated with storm events, third-party vessel interaction or unexpected equipment failure will be managed through the Environmental Management Plan, inspection requirements, gear recovery procedures and beach-cast monitoring.

4.9 Algal Bloom

Description of the category

This category captures matters raised regarding the potential for the Project to contribute to harmful algal blooms (HABs) in Disaster Bay or the wider region, including specific concerns referencing the ongoing South Australian *Karenia* algal bloom event of 2025–2026 and reports made by objectors of toxic algal blooms in the vicinity of Disaster Bay in October 2022.

Number of submissions in support: 1 (Public).

Number of submissions in objection: 5 (5 Public).

Number of submissions providing comment: 0.

Representative quote — Support

"Environmentally Kelp will improve the quality of the water in and around Disaster Bay leading to increased marine biodiversity and help prevent damaging algal blooms." Malcolm Thomas (Wonboyn)

Representative quote — Objection

"Just hundreds of miles along this very same coastline — to the west of Disaster Bay but in South Australia — there is an 'unprecedented toxic algal bloom and natural disaster' which has continued for more than a year, and now shows signs of increasing again over the coming winter months … In October 2022, toxic algal blooms were detected in the vicinity of Disaster Bay/Twofold Bay, which demonstrates clearly how fragile the whole coastal environment is to change, including Disaster Bay." — Anne-Patricia Hemingway (Woodend, Vic)

RESPONSE

Auskelp acknowledges the seriousness of harmful algal bloom events as a category of marine environmental harm, and the catastrophic impact of the ongoing 2025–2026 South Australian *Karenia* bloom on marine wildlife, coastal communities, fishing industries and human health. The response below sets out the scientific position on the relationship between kelp aquaculture and Harmful Algal Bloom (HAB) risk — which is, on the evidence, the opposite of what some submitters have inferred.

Kelp aquaculture reduces, rather than contributes to, algal bloom risk

Cultivated kelp removes the very nutrients that fuel harmful algal blooms. HABs are driven by the convergence of nutrient enrichment (principally nitrogen and phosphorus from terrestrial runoff), elevated sea-surface temperatures (marine heatwaves), and favourable oceanographic conditions (upwelling, stratification). *Ecklonia radiata* is an autotrophic macroalga that takes up dissolved nitrogen, phosphorus and dissolved inorganic carbon directly from the water column and converts them to biomass that is then harvested and removed from the marine environment. The cultivation of kelp at scale is therefore recognised in the international scientific literature as a mitigation pathway against HAB risk, not a contributor to it.

The real drivers of HABs are terrestrial pollution and climate-driven marine heatwaves

The causes of the South Australian *Karenia* bloom are documented by the South Australian Government, the Commonwealth EPA, and peer-reviewed scientific literature. They are:

- a prolonged marine heatwave since September 2024, with sea-surface temperatures approximately 2.5°C above normal;
- nutrient influx from 2022–23 River Murray floodwaters carrying synthetic-fertiliser-derived nitrogen and phosphorus from upstream agricultural land into the marine environment; and
- a cold-water upwelling event during summer 2023–24, which transported additional nutrients to surface waters.

The dominant anthropogenic driver is the terrestrial runoff of land-based pollution, principally from synthetic fertiliser application within concentrated agricultural catchment. Seaweed aquaculture, far from being part of the problem, is part of the possible solution.

Kelp-derived biostimulants

A central and underappreciated consequence of expanding sustainable kelp aquaculture in Australian waters is the production of seaweed-derived plant biostimulants for use in terrestrial agriculture. Biostimulants derived from brown seaweeds — including *Ecklonia maxima* in South Africa, *Ascophyllum nodosum* in the North Atlantic, and *Durvillaea potatorum* and *Ecklonia radiata* in Australia — are demonstrated in peer-reviewed agronomic trials to improve plant nitrogen use efficiency, enhance root development, increase abiotic stress tolerance, and reduce the synthetic fertiliser inputs required to achieve a given crop yield by up to approximately 40% (Goñi et al., 2018, *Frontiers in Plant Science*; Deolu-Ajayi et al., 2022, *Plant, Cell & Environment*; Battacharyya et al., 2015). Reducing synthetic fertiliser application at scale across agricultural catchments is one of the most direct levers available to reduce the nutrient loads entering Australia's coastal waters and, in consequence, to reduce the risk of future HAB events of the type that occurred in South Australia.

The Project contributes in two ways. First, it builds the cultivation capacity and biomass supply required for an Australian-domiciled seaweed biostimulant industry, recognised in the NSW Aquaculture Vision Statement 2024, the NSW Seaweed Prospectus 2024 and the Marine Bioproducts Cooperative Research Centre roadmap 2025-2028. Second, it does so using a native species in offshore waters that do not displace other land uses or compete for freshwater resources. The expansion of biostimulant supply requires significantly more biomass sources, not fewer.

Loss of wild kelp

The progressive loss of wild *Ecklonia radiata* kelp forests along the NSW coastline (refer Section 4.5) is not merely a biodiversity loss. It is also the loss of a natural ecosystem service: the removal of dissolved nutrients from the water column by foundation-species kelp at landscape scale. As wild kelp forests have declined in some sections of the NSW coast — and as climate-driven pressure continues — the natural HAB-mitigation capacity of those waters declines correspondingly. Cultivated kelp aquaculture restores some of that nutrient-uptake function within the cultivated area, although it does not replace the broader ecosystem services of natural kelp forest. The argument that the Project will somehow contribute to HAB risk inverts the actual scientific relationship; the greater concern, on the evidence, is that wild kelp forest loss is reducing the system's natural defences against HABs at the same time as climate-driven heatwave and terrestrial runoff pressures are intensifying.

More research is required on kelp resilience under rising ocean temperatures

Auskelp acknowledges, and submitters have rightly raised, the legitimate concern that climate change — including rising sea-surface temperatures, EAC strengthening, and marine heatwave frequency — places stress on *Ecklonia radiata* populations and on temperate reef ecosystems generally. Continued scientific research is needed to determine the conditions under which Australian foundation kelp species can be preserved into the future, the adaptive diversity of the species, and the role of cultivation and restoration tools (including Reef Adapt) in supporting wild population resilience. The Project, through its hatchery operations, broodstock program, and partnership with the Marine Bioproducts Cooperative Research Centre, contributes directly to that research base (refer Section 4.5). The Auskelp test program has produced

more than five years of site-specific data on the cultivation performance of *Ecklonia radiata* under varying laboratory and oceanographic conditions in Twofold Bay and Disaster Bay — data that is itself a scientific contribution to the question of kelp resilience under changing conditions.

The south-east Australian coast — including the Tasman Sea waters off the NSW far south coast in which Disaster Bay is located — is recognised by CSIRO, the Bureau of Meteorology and the Australian Government *State of the Environment Report* as one of the fastest-warming ocean regions in Australia, with sea-surface temperatures rising at approximately three to four times the global average rate over recent decades, driven by the southward extension of the East Australian Current under climate change (CSIRO/BOM, *State of the Climate 2024*; Australian State of the Environment Report, 2021; Ridgway, 2007).

This places Disaster Bay within the most rapidly warming Australian marine setting, materially increasing the pressure on wild *Ecklonia radiata* populations along this coastline and reinforcing the need for the cultivation, research and adaptive-genetics capacity that the Project supports.

Assessment Outcome

Algal bloom risk is addressed within the water quality assessment at EIS Sections 7.4–7.8 and 9.4.1. The combination of (a) the nutrient-removing action of cultivated *Ecklonia radiata*; (b) the absence of any feed, fertiliser, chemical or nutrient input to the marine environment from the Project; (c) the contribution of the Project to the supply of seaweed-derived biostimulants that reduce reliance on synthetic agricultural fertiliser at catchment scale; (d) the established scientific attribution of HABs to marine heatwaves, terrestrial nutrient runoff and oceanographic drivers; (e) the role of cultivated and restored kelp in supporting future ecosystem resilience — supports a finding that the Project is a net positive contributor to the long-term mitigation of HAB risk in Australian waters.

4.10 Noise and Vibration

Description of the category

This category captures matters raised regarding airborne and underwater noise and vibration generated by Project construction, operation and maintenance — including vessel engine noise, anchor installation, drone operation, and the broader acoustic impact on the wilderness setting and on marine fauna.

Number of submissions in support: 0.

Number of submissions in objection: 34 (34 Public).

Number of submissions providing comment: 0.

Representative quotes — Objection

"The most obvious impact will be the sight of ropes and other physical infrastructure, and the noise and disturbance caused by greatly increased boat traffic." — Kerri-Lee Harris (Wonboyn, NSW)

"The infrastructure associated with the kelp farm would degrade the natural beauty of the bay and the noise associated with its operation and ongoing maintenance would destroy its tranquility." — Paul Whitington (Wonboyn, NSW)

"The kelp farm will generate noise … and noise disrupts whale communication and increases whales' stress levels." — Anonymous (Hampton, Vic)

"Further the boat traffic required for harvesting and maintaining the kelp will pollute the area with noise, waste and fumes." — Paul Hellyer (St Kilda East, Vic)

RESPONSE

The Project recognises that submitters have concerns about the effects of noise related to the Project. Aquaculture is primarily passive with limited acoustic inputs. As a result, the Project's offshore location (greater than 1.1 km offshore) generates limited noise compared to the surrounding environment. The Project avoids high intensity acoustic sources, as follows:

- **No pile driving**. The mooring system uses helical screw anchors installed by torque-driven rotational deployment from a service vessel. There is no impact pile driving, no vibratory pile installation, and no percussive seabed activity. Helical screw anchors are the lowest-acoustic-impact anchoring methodology available for offshore aquaculture and are specifically adopted to avoid the impulsive noise signatures most commonly associated with marine fauna acoustic disturbance (EIS Sections 9.2.1 and 9.3.4).
- **No dredging or blasting**. The Project does not require any dredging in Disaster Bay, Wonboyn Lake or any port approach. No blasting is undertaken at any stage of construction, operation or decommissioning.
- **No fixed mechanical plant in the marine environment**. The Project does not include offshore generators, pumps, compressors, processing equipment, or continuous-operation acoustic sources. All processing occurs onshore at existing facilities at Snug Cove and the Edrom precinct.
- **No onshore industrial plant**. The Project does not introduce new onshore industrial facilities within the Wonboyn locality, Nadgee Nature Reserve, or adjoining coastal reserves. Onshore noise sources are limited to the existing operational profile of established port infrastructure and recreational boating use inside Wonboyn lake and estuary system.
- **No very large or fast vessels**. The project does not utilise vessels with high acoustic outputs such as cruise liners, large ships and does not operate vessels with high cruising speeds.

Vessel acoustic profile

The principal noise source associated with the Project is intermittent service-vessel traffic. Vessel movements are limited to 0–3 return trips per day during routine operations and seasonal harvest periods, with possible elevated activity during initial infrastructure deployment. Vessels operate predominantly during daylight hours and at relatively low cruising speeds (under 15 knots), with well-maintained marine motors that limit underwater noise emissions (EIS Sections 9.2.1, 9.3.4 and 9.4.5). The vessel class proposed is consistent with existing commercial fishing and aquaculture service vessels operating in the region.

The published cetacean acoustic literature demonstrates that potential impacts from underwater noise are influenced by source level, frequency, duration of exposure, proximity, and the behavioural context of the animal (Southall et al., 2007, 2019). Vessel noise risk is generally associated with higher source levels and sustained exposure from larger commercial vessels, whereas smaller vessels operating intermittently at low speeds typically generate lower acoustic emissions. The Project involves limited vessel movements using small aquaculture vessels operating at low speeds during daylight hours and does not involve high-intensity noise sources such as pile driving, seismic surveys or continuous industrial shipping.

Comparison with existing acoustic environment

The Project's vessel acoustic profile is consistent with — and significantly less than — the existing maritime activity already present in the broader region:

- **Twofold Bay** (25 km north) accommodates commercial shipping, woodchip export operations, tug movements, Royal Australian Navy operations, commercial fishing and prawning, whale-watching tour vessels, and recreational boating, with approximately 80–120 total vessel movements per day, and approximately 20 large vessel movements per day for vessels above 50 gross tonnes and 30 m in length (confirmed by NSW Port Authority).
- **Disaster Bay** itself, while remote, currently sees recreational fishing boats, abalone and sea-urchin dive vessels, commercial fishing vessels, and occasional jet ski usage.
- **Wonboyn Lake** supports oyster aquaculture operations with daily service-vessel movements as part of established commercial activity, as well as significantly higher recreational boating usage, including waterskiing etc.

Overall, the EIS records the Project's noise levels as equivalent to the ambient noise levels at exposed coastal locations along the NSW far south coast (IE Greenglades Beach), characteristic of the surrounding wilderness coastline; which is dominated by natural wind, swell, and biological soundscape contributions. The

Project does not introduce any new category of acoustics not already present; it adds limited, intermittent contribution within an existing low-traffic marine environment, and is not expected to alter the acoustic character of the surrounding wilderness coastline or result in any discernible increase in regional underwater noise above natural variability (EIS Section 9.3.4).

Onshore acoustic impact on Wonboyn and Nadgee

The closest residential location to the lease is more than 3 km away to North Wonboyn across open water and Baycliff, with the Wonboyn village situated >5 km away across a forest area. Operational vessel noise at this distance is attenuated by open ocean propagation, wave action, prevailing winds, and the absence of direct noise pathways. The acoustic impact on the wilderness character of Nadgee Nature Reserve and the broader Wonboyn locality is, accordingly, limited and consistent with the existing pattern of intermittent commercial and recreational marine activity in the area (EIS Section 9.3.4).

Underwater acoustic impact on marine fauna

Underwater acoustic impact on cetaceans, fish, seabirds and other marine fauna is addressed at EIS Sections 9.4.5 and 9.4.7, with detailed mitigation set out in Risk Tables 19 and 21. The combination of low vessel-class acoustic signature, low transit speeds, and the avoidance of high-impact construction acoustic sources supports the EIS conclusion that the underwater acoustic risk to marine fauna is low and is managed within accepted operational practice for coastal aquaculture (EIS Section 9.4.5).

Drone operation

In response to NPWS advice regarding drone use and the protection of Nadgee Nature Reserve, drone operations associated with the Project are restricted to the lease area and its immediate approaches. No drones will be flown into or over Nadgee Nature Reserve airspace without approval. Drone use is limited to inspection, animal-interaction monitoring, and equipment checks where required; operations are conducted in accordance with CASA regulations and the NPWS *Use of Drones in Parks* policy. Drone acoustic emissions are low and intermittent, and are not anticipated to materially contribute to background noise levels in the Wonboyn locality.

Light and adjacent operational considerations

While outside the strict definition of "noise and vibration", several submitters raised concerns regarding artificial lighting in combination with noise. Project lighting is limited to four navigation strobe lights on the corners of the lease in accordance with IALA (2008) special-marker requirements (low-intensity flashing white, with vertical divergence ≥ 9 degrees), and deck and navigational lighting on service vessels during occasional night-time operations. The Project complies with the *National Light Pollution Guidelines for Wildlife* (Commonwealth, 2020). Light pollution impacts on seabirds and nocturnal species have been assessed as negligible (EIS Section 9.4.3).

Assessment Outcome

Noise and vibration matters have been extensively studied and are clearly addressed at EIS Sections 9.2.1, 9.3.4, 9.4.5 and 9.4.7, with mitigation measures set out in Risk Tables 4, 12, 19 and 21. The significant distance from shore and the absence of pile-driving, percussion, dredging or blasting; the use of helical screw anchors with low-acoustic installation methodology; the limited and intermittent vessel profile; the consistency of the vessel acoustic profile with existing maritime activity; the absence of fixed mechanical plant in the marine environment — together support a finding that noise and vibration impacts have been comprehensively assessed as low.

Auskelp takes the views of the Wonboyn, Eden and wider Bega Valley community seriously. The quiet, remote character of Disaster Bay and the surrounding coastline is one of the defining values of the area, and Auskelp recognises that the concerns raised in submissions about noise and the loss of tranquillity reflect a genuine and deeply held attachment to that character, as well as potential acoustic effects on marine mammals. The Project has been designed and located with that attachment in mind, and the operational protocols set out above.

4.11 Visual Amenity

Description of the category

This category captures matters raised regarding the visual impact of the Project, specifically as it relates to visual impacts on Disaster Bay, Greenglades Beach, the Wonboyn locality, Nadgee Nature Reserve, Merrica, and the broader coastal seascape — including the visibility of surface infrastructure (corner navigation markers, surface floats), vessel presence, and the perceived loss of an undeveloped ocean view.

Number of submissions in support: 0.

Number of submissions in objection: 90 (89 Public, 1 Organisation).

Number of submissions providing comment: 1 (Public).

Representative quotes — Objection

"Wonboyn is a rare place of wild natural coexistence and the kelp farm will be a visual eyesore against a backdrop of wilderness." — Kate Johnston (Wonboyn, NSW)

"At present there is no permanent man-made infrastructure outside of the Wonboyn lake area, and introduction of the proposed Seaweed aquaculture structures will irreparably damage and degrade the visual, cultural and natural significance of this location." — Nigel Bertram (Fitzroy, Vic)

"The approval of a private enterprise such as a kelp farm at Disaster Bay will not only impose and ruin the visual , aesthetic of that location but I believe will have long term impacts on the natural environment that will be impossible to reverse." — Anonymous (Brunswick East, Vic)

"This represents a clear industrialisation of a natural seascape, with impacts including visual intrusion and loss of the undeveloped character." Chris Fraser (Wonboyn)

"I have attached some recent photos of this beautiful place to remind Planners of the places that will be irreversibly scarred by this development." — Paul Hellyer (St Kilda East, Vic)

Agency Review

Agency review by DPHI requested further information regarding risk visual assessment. Responses to these matters are addressed in the following section (click to view):

Section 5.13.1 Impacts on Local Character and Amenity.

RESPONSE

Auskelp acknowledges the importance placed by submitters on the visual character of Disaster Bay and the wider coastline. The visual amenity matters raised overlap closely with the wilderness and coastal character matters already addressed at Section 4.4 of this report.

The 200-hectare lease is positioned a minimum of 1.1 km offshore from Greenglades Beach at the closest corner and 1.1–2.1 km from the Nadgee Nature Reserve Declared Wilderness Area (EIS Section 9.3.1). The longline infrastructure is predominantly sub-surface — the cultivation lines, anchor lines, and main backbone lines sit beneath the water surface and are difficult to discern from shore. The visible surface elements are limited to:

- four navigation corner markers at the lease corners, specified to IALA (2008) special-marker standards with low-profile design (EIS Figure 43);
- small surface floats at intervals along the longline mainlines, sized for buoyancy and visibility for marine safety, not for prominence;
- Further float specifications and corner marker design details can be found in Section 5.13.15 of this document.

The design uses low-profile infrastructure, muted non-reflective colours (except where International Association of Marine Aids to Navigation and Lighthouse Authorities standards require otherwise), and a

best-practice spatial layout that minimises visual contrast with the surrounding seascape (EIS Section 9.3.1). Visual representations of the lease as seen from shore are provided at Section 5.13.1.

No infrastructure will be visible from any residential location in the Wonboyn locality, and there is no land-based infrastructure introduced by the Project (refer Sections 4.4 and 4.10).

Critically, the visual impact of the Project is not a matter of prediction or modelling alone — it can be directly observed today. The existing Auskelp Section 37 test lease has been deployed in Disaster Bay, approximately 800 m offshore from Greenglades Beach, for more than two years, and provides an excellent real-world reference for the visual presentation of the proposed Project. Because the test infrastructure uses the same low-profile, predominantly sub-surface longline design proposed for the full-scale development, it demonstrates — across the full range of weather, sea-state, tide and lighting conditions — exactly how such infrastructure reads from shore-based and elevated coastal viewpoints. This makes it a conservative reference in an important respect: the test lease sits around 800 m from shore, whereas the proposed Project will be located a minimum of 1.1 km offshore, some 300 m further out. The visual presence of the Project will therefore be lower than that of the test lease already in the water. Observations of the test lease to date — including from residents, regular beach visitors and recreational users of the bay — consistently report that the infrastructure is difficult to discern from shore even in good visibility.

Comparison with established oyster aquaculture

The Project's visual profile is more limited than that of the existing, accepted, and locally valued oyster aquaculture operating in Wonboyn Lake. As described in Section 4.4, approximately 47 hectares of oyster leases currently operate in the Wonboyn Lake and Wonboyn River estuary (EIS Section 1.5). The Wonboyn oyster industry uses:

- visible surface infrastructure — longlines, baskets, posts and trays — across the surface of the lake, at distances of tens of metres rather than 1.1 km from the shoreline of the village;
- daily vessel movements during oyster operational seasons;
- buildings and shore infrastructure at the lake margin (sheds, jetties, processing areas) which the proposed Project does not introduce.

By any reasonable comparison, the inshore oyster aquaculture in Wonboyn Lake is more visually present in the daily life of Wonboyn residents and visitors than the proposed offshore Project will be. This is not a criticism of the oyster industry — quite the opposite — it is an established, admired and respected part of the local community. The relevant point is that the local seascape already includes a well-loved aquaculture operation whose visual character is more pronounced than the proposed Project. Submitters who value the existing oyster operations at Wonboyn, but object to this Project on visual grounds alone, may wish to consider this context.

As requested by DPHI, a detailed response to local character and amenity is provided at Section 5.13.1 (Impacts on Local Character and Amenity) by way of further visual assessment. In response, viewpoint photography was gathered and prepared from the relevant publicly accessible vantage points, including Disaster Bay, Green Cape, Merrica and the north and south ends of Greenglades Beach, each identifying the position of both the test farm and the directions and distances to the proposed AL21/004 lease area – to enable direct comparison of distance and visibility. The assessment draws on the long-term in-water demonstration — the existing Auskelp Section 37 offshore test farm, deployed in Disaster Bay for more than two years

Passive operational profile

Visual amenity impacts depend not only on physical infrastructure but on operational presence. The Project is fundamentally passive. Unlike intensive aquaculture or maritime industrial operations, the Project involves:

- low-profile surface infrastructure, with submerged systems;
- a location >1.1 km offshore;
- 0-3 vessel return trips per day during routine operations, primarily during daylight hours;

- the farm being unoccupied for large parts of the year.

On a typical day, the lease will have no vessels present and only the four corner navigation markers and intermittent surface floats will be visible at distances > 1.1 km.

Effect on the Nadgee Nature Reserve

Viewpoints from Nadgee Nature Reserve have been documented in Section 5.13.1. The Nadgee Nature Reserve has been considered as a high-sensitivity visual receptor in the visual amenity assessment. There is no impact on the Reserve's terrestrial landscape character. The Reserve's coastline-from-the-sea visual character is affected only by the limited surface infrastructure described above, which is consistent with the existing intermittent maritime activity visible from elevated coastal viewpoints within and adjacent to the Reserve.

Assessment Outcome

Visual amenity matters are addressed in greater detail in the visual assessment at Section 5.13.1 and at EIS Section 9.3.1, with the mitigation framework set out in Risk Table 9. The EIS visual amenity assessment concludes that the impact has been assessed as low, localised, and compatible with the character of the surrounding seascape, having regard to the offshore location, the sub-surface nature of the infrastructure, the absence of fixed land structures, the intermittent and seasonal vessel pattern, the established acceptance of more visible aquaculture in the same locality, and the full reversibility of the Project.

It is also relevant to note the practical visual reality of a 1.1 km minimum offshore distance across an open ocean environment. This is a substantial separation. The Auskelp test infrastructure has been operating at approximately 800 m offshore from Greenglades Beach for more than two years, and is reported by many local observers — including residents, regular beach visitors, and recreational users of the bay — as being difficult to discern clearly from shore even in good visibility conditions. The proposed full-scale Project is positioned 300 m further offshore than the test site, with a deliberately low-profile surface infrastructure footprint. The practical visual presence of the Project from shore-based viewpoints is, on the evidence of the test program, modest.

Compared to the existing oyster aquaculture in Wonboyn Lake — where infrastructure sits tens of metres from the shoreline and the daily life of the village — the visual impact of the proposed offshore lease is substantially less prominent, less continuous, and less integrated into daily lines of sight. The community's longstanding acceptance of Wonboyn oyster aquaculture as a valued and characteristic feature of the locality is itself the strongest practical evidence that a well-managed aquaculture operation — even one in close visual proximity — is compatible with the character of this coastline. The proposed Project, located far further offshore and with a far smaller visible surface footprint, sits well within that compatibility threshold.

Auskelp acknowledges the strong attachment of submitters to the undeveloped character of Disaster Bay and recognises that for some submitters, no level of visual change will be acceptable. That is a legitimate position, and Auskelp respects it. The Project has been designed to minimise visual presence within the constraints of operating a viable offshore aquaculture facility, and the IPC will weigh those constraints against the public interest considerations addressed across this report.

4.12 Coastal Erosion

Description of the category

This category captures matters raised regarding the potential for the Project to disrupt natural coastal processes, including wave climate, sediment transport, longshore drift, beach stability, dune systems, and estuary entrance dynamics at Wonboyn Lake. Issues raised include the disruption of wave patterns by the longline infrastructure, modification of currents reaching the shoreline, large kelp deposits during storm events causing sand build-up at the Wonboyn Lake entrance, and broader concerns about the integrity of coastal processes adjacent to Nadgee Nature Reserve.

Number of submissions in support: 0.

Number of submissions in objection: 28 (Public).

Number of submissions providing comment: 0.

Representative quotes — Objection

"You do not need to be a scientist to realise that wave patterns and currents will surely be disrupted which will have an impact on the neighbouring shoreline and beaches." — Paul Hellyer (St Kilda East, Vic)

"Impact on Coastal Processes and Local Industry: There are concerns that large-scale kelp deposits during "big blow"' weather events could lead to sand buildup in estuary entrances." — Adam Chorvat (Cooma, NSW)

"These areas are protected specifically because of their wilderness values, minimal human interference, high biodiversity, and pristine coastal processes." — Halley Hunt (Wonboyn, NSW)

"Nadgee's beaches, rocky shorelines and estuaries are shaped by natural processes that have existed for generations, and once those systems are disrupted, the damage can be extremely difficult to reverse." — April Fewster (Preston, Vic)

RESPONSE

The Project is located in open ocean at 20–25 m depth and a minimum of 1.1 km offshore from the shoreline at Greenglades Beach. This combination of distance and depth places the lease well seaward of the surf zone, the wave breaking zone, and the active sediment transport zone that drive coastal erosion and beach dynamics. The EIS specifically concludes that the kelp farm is hydrodynamically decoupled from surf-zone processes, and any interaction with coastal sediment processes is minimal (EIS Section 9.1.1).

The mooring system uses helical screw anchors installed by torque-driven rotational deployment to a depth of 3–6 m below the seabed. The anchors are point-loaded structures, not continuous foundations, and do not function as physical barriers to sediment movement. The longline infrastructure itself sits in the upper water column suspended from buoyancy floats; it does not extend to the seabed across the lease and does not impede seabed sediment transport. The Project involves no dredging, no rock placement, no reclamation, no groynes, no breakwaters, no rock walls, and no other shoreline-altering structures (EIS Sections 4.11, 9.1.1 and 9.2.3).

The longline infrastructure is not capable of measurably altering wave climate at the shoreline in such a high energy environment. The hydrodynamic assessment within the EIS confirms that the longline infrastructure does not generate measurable changes to wave height, wave period, wave direction, or wave energy at the shoreline. Three factors drive this conclusion: (a) the orientation of the longlines parallel to the predominant south-to-southeast swell direction, allowing swell energy to pass along the length of the lines rather than perpendicularly across them (EIS Section 4.11); (b) the spatial separation of approximately 1.1 km between the lease and the shoreline, across which any localised hydrodynamic effect is rapidly dissipated by open-ocean processes (EIS Section 7.6); and (c) the low-density, suspended nature of the longline infrastructure, which is fundamentally different from the dense, surface-piercing fixed structures (breakwaters, jetties, piers) that genuinely modify wave climate at the shoreline. The hydrodynamic effects observed in shallow, high-density farm systems internationally are not applicable to the open-ocean, low-density, depth-separated configuration of this Project (EIS Section 7.6).

<u>No impact on Wonboyn Lake estuary entrance</u>

The Project does not generate large-scale beach-cast kelp deposits (refer Section 4.8). Auskelp confirms there is no mechanism by which the Project would cause sand build-up at the entrance of Wonboyn Lake. The Wonboyn Lake entrance dynamics are governed by tidal exchange, swell-driven sediment transport across the bar, and lake outflow — all driven by natural coastal processes that operate independently of the Project's offshore location 1.1 km from the open coast (EIS Section 7.6).

<u>Engineering and regulatory framework</u>

The Project complies with the *State Environmental Planning Policy (Resilience and Hazards) 2021* by demonstrating that the site, infrastructure and operational systems are designed to withstand coastal hazards and operate without contributing to them. The EIS coastal processes assessment was prepared with reference to the BMT spectral wave ray tracing model, the long-term Eden Waverider Buoy dataset (1978–2024), and the *NSW Coastal Management Manual* (EIS Sections 7.5 and 7.6).

The Project does not introduce any permanent seabed structure or shoreline alteration. The Decommissioning Plan at EIS Section 4.15 provides for the full removal of all longline infrastructure, surface floats, navigation markers and helical screw anchors at the end of the Project's operating life, returning the seabed to its pre-development state. Coastal processes at Disaster Bay and the adjacent shoreline of Nadgee Nature Reserve will be unaltered during operation and unaffected at decommissioning.

Assessment Outcome

Auskelp acknowledges the importance placed by submitters on the natural coastal processes of this stretch of coast. Coastal erosion and coastal processes matters are addressed at EIS Sections 7.4 to 7.6 and 9.1.1, with mitigation set out in Risk Table 2. The offshore depth-separated location, hydrodynamic decoupling from surf-zone processes, alignment of infrastructure with the dominant swell direction, absence of any shoreline-altering structures, full reversibility, and compliance with SEPP (Resilience and Hazards) 2021 — together support a finding that the Project does not contribute to coastal erosion at Disaster Bay, Greenglades Beach, Wonboyn Beach, or any beach within Nadgee Nature Reserve. As such the risk profile remains as low.

4.13 Location

Description of the category

This category captures matters raised regarding the suitability of Disaster Bay as the site for the Project, including submissions arguing that the Project should be relocated to an industrialised location, an already-degraded coastal area, or a different region of NSW.

Number of submissions in support: 1 (Public).

Number of submissions in objection: 91 (89 Public, 2 Organisation).

Number of submissions providing comment: 2 (Public).

Representative quotes — Objection

"Whilst aquaculture is of course an acceptable activity and could be supported in general, this is simply the wrong location for such a commercial-industrial use." — Nigel Bertram (Fitzroy, Vic)

"I strongly believe that alternative locations better suited to commercial marine farming should be considered, particularly areas that are already industrialised or less environmentally and visually sensitive." — Anonymous (Wonboyn, NSW)

"Surely there are better locations that are accessed by land and already have industry present." — Anonymous (Brunswick East, Vic)

"The project should be moved to an area of shoreline that is already degraded by industrial use, not in the marine haven of disaster bay." — mardi denham-roberts (stet) (Bend of Islands, Vic)

"Surely the kelp farming could be relocated but please do not put a 200ha industrial scale development in the middle of our amazing pristine wilderness." — Mark Williamson (Canterbury, Vic)

"Extreme weather, such as East Coast Lows (~10 times a year according to the BOM) can produce 8m swells and 10m waves." Dr Virginia Sheperd (Faulconbridge, NSW)

RESPONSE

Auskelp acknowledges the strongly-held view among many submitters that the Project should be located elsewhere. The response below sets out the structured site-selection assessment that led to the choice of Disaster Bay, and the reasons that relocation to other coastal locations is not a viable alternative.

Structured site selection process

The selection of Disaster Bay as the Project site was the outcome of a multi-criteria assessment undertaken with DPIRD Fisheries in accordance with the NSW Marine Waters Sustainable Aquaculture Strategy (MWSAS) and documented at EIS Sections 3.5 and 3.6, with the MWSAS Constraints Criteria for Lease AL21/004 set out

in Table 1 of the EIS. Alternative regional sites and alternative cultivation systems (catenary rigs, circular systems, tubenets, rafts, net-based systems) were reviewed (EIS Section 3.6.1), and the Project's longline configuration in Disaster Bay was identified as the best combination of environmental suitability, infrastructure compatibility, oceanographic conditions, stakeholder acceptance and operational viability.

Why Disaster Bay was selected

The Disaster Bay selection criteria documented in EIS Section 3.5 fall into seven categories. The most material site-specific factors are summarised below:

- **Regulatory alignment** – the site is located within NSW State waters, outside marine parks, aquatic reserves, declared critical habitats, and statutory exclusion areas; outside declared military usage and defence exercise zones; assessed under MWSAS and not subject to high-risk exclusion constraints.
- **Environmental suitability** – locally occurring native *Ecklonia radiata* kelp beds in the wider region, moderate ocean temperature, naturally high seasonal nutrient levels due to upwelling; limited man-made pollution or agricultural runoff; current eddies and nutrient vortexes generated by Green Cape and Nadgee headlands.
- **Not a recognised whale migration, resting area or migration pathway** – Disaster Bay is not a recognised whale resting, aggregation or calving area; the recognised whale aggregation site on this stretch of coast is Twofold Bay, 25 km north (refer Section 4.6). The site is also outside attributable whale migration pathways, see Section 5.13.4.
- **No shipping channels** – the area is not located in a recognised shipping channel or designated port approach with low marine traffic usage.
- **No Defence operations** – located in an area not currently utilised for Defence operations.
- **Sandy substrate, low biodiversity conflict** – the lease area is classified as unvegetated sandy substrate with low structural complexity, no mapped threatened ecological communities, protected reef systems, seagrass meadows, or significant ecosystem-engineering fauna (EIS Sections 7.9 and 7.11). Wild kelp beds and rocky reef habitats are located outside the lease footprint (refer Section 4.5).
- **Hydrodynamic suitability** – depth of water greater than 20 m ensuring minimal seabed shading and interaction; prevailing swell, depth, seafloor topography, coastline refraction, and ocean current systems provide consistent oceanic upwelling conducive to kelp growth.
- **Climate suitability** – locations north of Merimbula are increasingly compromised by warming waters, weakened upwelling, and reduced nutrient availability (refer Section 4.5). The Project site is the most southerly viable commercial cultivation location on the NSW coast, providing the strongest resilience profile against ocean warming.
- **Spatial buffering** – the lease is located >1.1 km from any shoreline, >1.1 km from sensitive benthic features, with no residential housing, cultural heritage sites or scenic lookouts within 5 km.
- **Outside native title claim –** the Project location is not in an area currently under a marine native title claim – NSW state waters from Twofold Bay to north of Wollongong are under a current Yuin native title claim [NSD1331/2017].
- **Infrastructure and logistics** – approximately 25 km south of Eden, providing access to existing port, wharf, slipway and industrial infrastructure at Snug Cove and the Edrom precinct, without the need for new coastal development.
- **Compatibility with existing industries** – co-located with established aquaculture, fishing and marine industries in the Eden region; the Wonboyn Lake oyster industry (refer Section 4.4) provides existing operational and supply-chain compatibility.

- **Empirical validation** — more than two years of in-situ open-ocean testing within Disaster Bay under DPIRD Fisheries section 37 permits has confirmed the suitability of the site for commercial *Ecklonia radiata* cultivation.

Response to "go elsewhere" submissions

Several submitters propose that the Project be relocated to "already-industrialised" or "already-degraded" locations. Auskelp respectfully responds substantively:

1. Commercial-scale offshore kelp aquaculture requires specific oceanographic conditions — water temperature, upwelling, depth, swell exposure, current regime, nutrient availability, seabed substrate, and absence of agricultural or urban pollution. These conditions are not available at the alternative locations typically proposed in submissions. Already-industrialised coastal areas frequently exhibit elevated turbidity, water quality compromise from terrestrial runoff, port infrastructure conflicts, and water-column conditions unsuitable for *Ecklonia radiata* cultivation.
2. The site selection assessment formally considered alternative sites (EIS Section 3.6.1). Areas examined included other locations along the NSW south coast, more northern NSW coastal locations, and embayments adjacent to existing port infrastructure. The Disaster Bay site was selected as the optimal balance of the criteria listed above.
3. The Project is not industrial infrastructure. The MWSAS framework specifically establishes aquaculture as an appropriate marine use within NSW State waters outside marine parks and exclusion zones. The MWSAS expressly contemplates aquaculture in locations of the type at which the Project is proposed. The Project is not analogous to onshore industrial development and does not bear the comparison that some submitters draw.
4. There is no land-based footprint introduced by the Project within the Wonboyn locality, Nadgee Nature Reserve, or adjoining coastal reserves (refer Section 4.4). The "industrial development of the coastline" framing applied by some submitters is not consistent with the actual scope of the Project.
5. Climate resilience — as set out in Section 4.5 and Section 4.9, Australian wild kelp forests face accelerating pressure from marine heatwaves, EAC strengthening and warming. The far south coast of NSW, in cool-water conditions south of Merimbula, is the location in which the long-term cultivation viability of *Ecklonia radiata* is strongest.

Crown Lands jurisdiction and agency advice

In response to advice from Crown Lands:

- Disaster Bay and East Boyd Bay are Crown waterways, recognised within the Project's regulatory framework (EIS Section 5.3.4 and 5.3.20). The lease is administered through DPIRD Fisheries under the *Fisheries Management Act 1994*, with Crown Lands' jurisdictional interest acknowledged.
- Native Title — the Native Title pathway for the lease area is administered by DPIRD Fisheries. The Project area is currently outside any current or pending native title claim.

These matters are addressed in agency consultation and will be confirmed in the conditions of consent and in the conditions of the aquaculture permit issued by DPIRD Fisheries.

Assessment Outcome

Location and site-selection matters are addressed at EIS Sections 3.5 and 3.6, 4.5 to 4.7, and 5.3.5 (SEPP framework), with mitigation set out in Risk Tables 5 and 22. The combination of the structured MWSAS-aligned site selection assessment, the documented review of alternative sites and cultivation systems, the suitability of Disaster Bay against environmental, hydrodynamic, climatic and operational criteria, the empirical validation through more than two years of in-situ offshore ocean testing, and the alignment of Crown Lands, TfNSW and Native Title agency consultation — supports a finding that the location of the Project is appropriate and that no superior alternative site has been identified. Auskelp acknowledges the strongly held view of submitters that the Project should be located elsewhere, and respects that view, but

the structured site-selection assessment does not identify a viable alternative location. As such, Disaster Bay is determined as an appropriate location for this important farming operation.

4.14 Transport

Description of the category

This category captures matters raised regarding the transport impacts of the Project, including service-vessel movements, road traffic, vehicle access to the lease via Greenglades Road and Nadgee Nature Reserve, and the use of existing port and wharf infrastructure at Snug Cove and the Edrom precinct.

Number of submissions in support: 3 (1 Public, 2 Organisation).

Number of submissions in objection: 43 (43 Public).

Number of submissions providing comment: 2 (Public).

Representative quotes – Support

"...the development aligns with broader efforts to enhance marine-based industries, encouraging complementary infrastructure, skills development, and investment that benefit the wider regional economy." – Will Kanavan, Pentarch (Melbourne VIC)

Representative quotes – Objection

"The most obvious impact will be the sight of ropes and other physical infrastructure, and the noise and disturbance caused by greatly increased boat traffic." – Kerri-Lee Harris (Wonboyn, NSW)

"Increased boat and vehicle traffic for maintenance and regular inspection of the kelp farm will inevitably change the character of these places which are currently secluded and remote." – Nigel Bertram (Fitzroy, Vic)

"Greatly increased traffic (land and sea no doubt), infrastructure, personnel, accommodation, widening of roads, destruction of natural protected flora and fauna will overwhelm Disaster Bay and its surroundings." – Oxana Paschuk-Johnson (Eden, NSW)

RESPONSE

Service-vessel movements associated with the Project are limited to 0-3 return trips per day during routine operations, with elevated activity only during initial infrastructure deployment and seasonal harvesting. This has already been substantially addressed in Section 4.10. Vessels operate predominantly during daylight hours from Twofold Bay and at low cruising speeds (under 15 knots). The vessel class is comparable to existing commercial fishing and aquaculture service vessels in the region (EIS Sections 9.2.2 and 9.3.2).

The Project uses existing port and wharf infrastructure at Snug Cove and within the Edrom precinct. No new wharves, jetties, slipways or marine industrial facilities are proposed.

The Project does not propose any vehicle access through Wonboyn or Nadgee Nature Reserve. All service access to the lease is by vessel from existing port facilities at Snug Cove or the Edrom precinct.

The Project's land transport profile is limited to staff travel between accommodation and the Edrom precinct, and periodic delivery of equipment and harvested biomass between the Edrom precinct and processing facilities. Volumes are commensurate with a 30-person workforce operating on staged shifts and are consistent with existing road traffic on the Princes Highway and the Edrom-Eden road network. Bega Valley Shire Council has confirmed no further issues with the Project.

Assessment Outcome

Transport matters are addressed at EIS Sections 9.2.2 and 9.3.2, with mitigation set out in EIS Risk Tables 5 and 10. The low and intermittent marine vessel-movement profile, the consistency of the Project's vessel activity with existing Twofold Bay maritime use, the use of existing port and land-based infrastructure under appropriate commercial access agreements with the Port Authority of NSW and TfNSW, the withdrawal of the Greenglades Road access proposal, and the absence of any new road construction or road widening – supports a finding that transport impacts have been comprehensively assessed as low risk. The Project will

continue to coordinate vessel-movement scheduling with Port Control and Defence operational priorities through the operational phase.

4.15 Navigation and Maritime Safety

Description of the category

This category captures matters raised regarding the navigation and maritime safety implications of the Project, including navigational hazard for commercial and recreational vessels, marking and lighting of the lease, vessel coordination, conflicts with shipping lanes and dive operations, exclusion of waterway users, and the accommodation of Royal Australian Navy operations in Twofold Bay and Disaster Bay.

Number of submissions in support: 1 (1 Organisation).

Number of submissions in objection: 18 (Public).

Number of submissions providing comment: 0.

Representative quotes — Objection

"The 1st category is navigation hazard — the lease as proposed crosses directly in front of Merrica River entrance this is a waterway travelled by power boats visited frequently by locals and holiday makers in the area." — Anonymous (Wonboyn, NSW)

"User Conflicts and Navigation Hazards: Aquaculture leases can restrict access to traditional fishing, boating, or diving locations, causing conflict with commercial and recreational users." — Anonymous (Canberra, ACT)

Agency Review

Agency review by DPHI requested further information regarding focused on navigational marking, vessel movements, maritime safety and interaction with existing marine users. Responses to these matters are addressed in the following section (click to view):

Section 5.13.15 Infrastructure Design

Section 5.13.18 Vessel Movements

Section 5.13.19 Concurrent Construction and Operation

RESPONSE

Site selection outside navigation channels

The Project's location was specifically selected to avoid recognised shipping channels, established navigation routes, and high-traffic maritime zones. Disaster Bay contains no recognised or frequented shipping channels, port approaches, or commercial moorings (EIS Section 3.5). The lease is positioned outside the established navigation routes used by commercial shipping into Twofold Bay and Snug Cove, outside declared military usage and defence exercise zones (refer below), and outside the principal recreational boating routes used between Eden, Twofold Bay and the Wonboyn Lake entrance.

Lease marking and lighting

The lease will be marked in accordance with the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Standards (IALA, 2008) for marine aquaculture. The marking system comprises:

- Four special-mark navigation buoys at the lease corners, complying with IALA Special Mark standards (EIS Figure 43);
- Low-intensity flashing yellow navigation lights on each corner marker, visible from a minimum nominal range consistent with IALA special-marker requirements, as required by NSW Port Authority;
- Evenly spaced surface floats along each longline backbone providing visual indication of the in-water infrastructure;
- AIS (Automatic Identification System) virtual markers for the lease boundary, ensuring electronic visibility to all AIS-equipped vessels; and

- Reflective and high-visibility markings on the corner buoys, including lease designation labelling to facilitate identification and recovery in the unlikely event of any infrastructure displacement (EIS Section 9.2.4).

In the event of approval, final specifications will be confirmed with Port Authority and Transport for NSW prior to deployment.

Communications, coordination and notification

In response to Port Authority of NSW advice, Auskelp will implement the following coordination and communications protocols:

- Pre-deployment notification of all infrastructure deployment, recovery, and maintenance activities to Port Control, the Australian Hydrographic Office (for Notice to Mariners), and the Port Authority of NSW;
- Real-time vessel coordination with Port Control during deployment, harvesting and maintenance phases when multiple Project vessels are operating;
- Maintenance protocols for navigation markers and lights, including regular inspection, prompt replacement of any failed lights or markers, and notification to Port Control of any marker outage and the timing of remediation; and
- Notice to Mariners issued and updated through the Australian Hydrographic Office, providing public notification of the lease location and its marking arrangements.

Defence priority access

The Port Authority of NSW has identified that Royal Australian Navy operations take priority in respect of Twofold Bay and adjacent waters. Auskelp confirms that Project vessel scheduling will accommodate Defence operational priorities, and Project vessels will not undertake operations during declared Navy exclusion or exercise periods. The lease lies outside the Royal Australian Navy exclusion zones identified at EIS Figures 25 and 26. Coordination with Defence operations will be maintained through Port Control as the primary point of communication.

Other waterway users

The open-ocean section of Disaster Bay in which the lease is located is not a high-use recreational area, and access to it is inherently limited. The nearest launch point is at Wonboyn, across the Wonboyn Lake bar — a notoriously weather-dependent crossing that is regularly closed by swell, tide and sea state, and which for much of the year restricts vessel-based access to the open bay (refer Section 4.17). The lease area is also more than 25 km by water from Eden, so recreational vessel traffic through the specific lease area is low, and the site does not sit on the principal recreational boating routes between Eden, Twofold Bay and the Wonboyn Lake entrance. Rather than introducing a hazard into a busy waterway, the Project adds a well-marked, charted and AIS-visible fixed reference into a comparatively remote and lightly-trafficked stretch of coast.

A permanent, monitored maritime presence in this section of Disaster Bay carries positive safety value: the lease will be published in Notice to Mariners and on nautical charts, its corner markers provide lit and AIS-visible navigation references, and the Project's vessels, equipment and Emergency Response Plan (Appendix RC2) establish a coordinated response capability — in an area that presently has none — that can support other mariners in distress within the search-and-rescue framework operated by Marine Rescue NSW and the Australian Maritime Safety Authority.

The Project does not prevent vessel transit through Disaster Bay; the lease occupies approximately 5% of the bay area (EIS Section 9.2.4). Recreational boating, commercial fishing transit, dive operations, abalone and sea-urchin diving, and other waterway uses can continue in the unaffected 95% of the bay. The Project does not interfere with vessel transit between the Wonboyn Lake bar and the open ocean. The Merrica River entrance is located to the south of the lease and access to the river entrance is not unduly obstructed by the lease infrastructure.

The Emergency Response Plan (Appendix RC2) details the required response coordination with the relevant statutory authorities and contact details.

Assessment Outcome

Navigation and maritime safety matters are addressed at EIS Section 9.2.4, with supporting marker specifications at EIS Figure 43 and the location of Defence operational zones at EIS Figures 25 and 26. Risk Table 7 sets out the mitigation framework and the risk profile remains low. Additional information has been requested by DPHI regarding corner marker specifications which can be found in Section 5.13 Infrastructure Design. The location of the lease outside recognised shipping channels and Defence operational zones, the IALA-compliant marking and lighting system, the AIS-virtual-marker coverage, the coordination and notification protocols developed in consultation with the Port Authority of NSW, the accommodation of Defence priority access, and the 95% of Disaster Bay that remains unaffected by the lease — together support a finding that navigation and maritime risks are generally low.

4.16 Commercial Fishing

Description of the category

This category captures matters raised regarding the impact of the Project on commercial fishing operations in Disaster Bay, including the displacement of established commercial fishing activity from the lease area; the impact on holders of Fisheries Management Act 1994 (NSW) entitlements that operate within or around the proposed lease; claims for financial compensation arising from loss of access to traditional fishing grounds; the safety implications of the lease for vessels seeking emergency shelter in Disaster Bay as a traditional maritime anchorage; the co-location of the Project with the established Eden urchin, abalone and other commercial fisheries; and the broader cumulative impact on the Eden and Far South Coast commercial fishing community.

Number of submissions in support: 2 (1 Public and 1 Organisation).

Number of submissions in objection: 6 (Public).

Number of submissions providing comment: 1 (Public).

Representative quote — Support

"My company exports and processes Sea Urchins in Pambula. This new Seaweed farm has major potential for both domestic and export markets. We currently export Live Abalone, Lobster and processed Sea Urchin from the region. This product would have serious economic value to the region and would bring in export dollars as well as regional employment. This is a win win for the region." — Ryan Morris, South Coast Sea Urchins (Lilyfield, NSW)

Representative quotes — Objection

"I hold two Gummy Shark entitlements to fish in Disaster Bay — the precise area that would be directly impacted by this proposed development … I currently take approximately $150,000 per annum in Gummy Shark from Disaster Bay … should the Department of Primary Industries issue a licence to the Auskelp developers and should my access to these fishing grounds be curtailed, restricted, or rendered unviable as a result, the impact on my business would be nothing short of catastrophic … I wish to place the Department on clear and unambiguous notice: should this licence be granted and my fishing grounds lost or compromised as a result, I will be seeking full compensation for lost fishing ground and lost income." — Michael Ballantyne, Licensed Fishing Business No. 450 (Greigs Flat, NSW)

Representative quotes — Comment

"Eden Kingfish Pty Ltd is a commercial fishing business in the NSW trap and line industry and has historically operated in the area proposed for the kelp farm. We have no issues with the establishment of the farm or its effect on the environment but we are concerned that there will be an exclusion zone around the Kelp farm that may exclude our business from operating in areas in Disaster Bay that we have worked for over 15 years." — Peta Geraghty, Eden Kingfish Pty Ltd (Eden, NSW)

Agency Review

As requested by DPHI, further information is required in response to commercial fishing – including mapping of the estimated commercial fishing zones of Disaster Bay against the proposed AL21/004 lease area. Responses to these matters are addressed in the following section (click to view):

Section 5.13.13 Conflicts with Existing Fishing Activities

RESPONSE

Auskelp acknowledges Mr Ballantyne's submission, and the clarification requested by Eden Kingfish Pty Ltd. The commercial fishing industry on the Far South Coast is an industry of generational standing, deep local knowledge, and significant cultural and economic value to the region. Auskelp does not approach this category lightly, and the response below sets out the technical position on access, the operational profile of the lease, the position on compensation, the position on maritime anchorage safety, and the consultation pathway through which commercial fishing matters will continue to be engaged through to lease grant and beyond.

Recognition of established commercial fishing activity in Disaster Bay

Auskelp accepts the position established by DPIRD Fisheries and by Mr Ballantyne's submission that Disaster Bay is an active, productive and lawfully-used commercial fishing ground supporting a range of FM Act fisheries – including the gummy shark fishery, prawn trawl, finfish trap and line, a growing sea urchin industry, lobster, abalone, and octopus operations. The lease area is not a vacant or under-utilised marine space, and the EIS does not represent it as such.

The proposed lease occupies 200 hectares, which represents approximately 5% of the marine area of Disaster Bay (EIS Section 9.2.4). The remaining 95% of Disaster Bay, the adjacent waters between the lease and the open ocean, the inshore zone between the lease and the shoreline, and the waters to the north (toward Twofold Bay) and south (toward Cape Howe) remain available for commercial fishing activity. The lease does not extend across the full width of the bay and does not isolate any section of the bay from continued commercial fishing access.

Co-location with the established Eden fisheries – including the urchin and abalone industries

The Project has been designed and located with the explicit intent of being co-located with, not in opposition to, the established Eden and Far South Coast commercial fisheries. Specifically:

- The South Coast Sea Urchins submission demonstrates active commercial alignment between the Project and an established Eden export business.
- More than five years of consultation has been undertaken with the local mussel, oyster, abalone and other marine industries (EIS Section 3.5 and Section 6.5).
- The Project's onshore processing and logistics base at Snug Cove and the Edrom precinct uses existing port infrastructure shared with the established commercial fishing fleet.

Financial compensation

Auskelp acknowledges Mr Ballantyne's clear statement of his intention to seek compensation for any loss of access and income arising from the Project, and respects the seriousness with which that position is advanced. Mr Ballantyne's two Gummy Shark entitlements are *not extinguished or reduced* by the Project – they remain exercisable across the wider fishery, and only 5% of the bay is affected. Auskelp's position is straightforward: the administration of commercial fishing entitlements under the *Fisheries Management Act 1994* (NSW), and any question of compensation, access adjustment, or industry restructure arising from a change in lawful use of NSW marine waters, is a matter for DPIRD Fisheries.

As requested by DPHI, additional information on this matter is provided in Section 5.13.13a Commercial Fishing, Financial Compensation.

Maritime anchorage safety – vessels seeking shelter

Mr Ballantyne raises an important safety matter regarding the use of Disaster Bay as a traditional anchorage by vessels seeking shelter from severe weather along the NSW–Victorian coast. Auskelp acknowledges this concern and responds substantively:

- **Marker and lighting.** The lease is marked with IALA-compliant special-mark navigation buoys, flashing yellow navigation lights, AIS-virtual-marker coverage, and evenly-spaced surface floats along the longline backbones (refer Section 4.15). The marking system is specifically designed to provide visibility under reduced visibility and night conditions.
- **Notice to Mariners.** The lease will be published in Notice to Mariners through the Australian Hydrographic Office and will appear on updated nautical charts, providing public notification of the location of the lease to all mariners (refer Section 4.15).
- **Existing anchorage areas.** The traditional anchorage area within Disaster Bay used by vessels seeking shelter is generally the more sheltered northern section, not the open-ocean section in which the lease is located. The lease has been positioned with regard to maintaining traditional anchorage capability within the bay.
- **Emergency response framework.** The Emergency Response Plan (Appendix RC2, revised in response to NPWS advice) incorporates protocols for response to vessel incidents within or adjacent to the lease, including notification of Marine Rescue NSW, the Australian Maritime Safety Authority and the Port Authority of NSW. Auskelp will operate emergency response equipment at Snug Cove and the Edrom precinct.
- **Liability question.** The question of legal and financial responsibility for vessel damage in the event of entanglement is governed by general maritime law and the conditions of consent, not by Auskelp's commercial preference. Auskelp will hold appropriate public liability insurance covering the lease infrastructure, and the marking and notification regime supports the position that a properly-equipped mariner exercising reasonable care will be on notice of the lease location.

Eden Kingfish Pty Ltd — exclusion zone question

Auskelp responds directly to Peta Geraghty's comment on behalf of Eden Kingfish Pty Ltd. There is no proposed exclusion zone around the lease boundary beyond the lease boundary itself. Commercial trap and line operations of the type undertaken by Eden Kingfish are encouraged in waters immediately adjacent to the lease boundary. The 200-hectare lease occupies approximately 5% of Disaster Bay, leaving the remaining 95% — including the waters immediately around the lease — available for Eden Kingfish's continued trap and line operations. Auskelp welcomes ongoing operational dialogue with Eden Kingfish on coordination of vessel movements where required.

Assessment Outcome

Commercial fishing matters are addressed at EIS Sections 7.16, 9.4.10 and 6.5, with mitigation set out in Risk Tables 10 and 24. The combination of the 95% of Disaster Bay that remains accessible for commercial fishing, the alignment of the Project with the established Eden urchin, abalone and other marine industries, the IALA-compliant lease marking, the Notice to Mariners regime, the regulatory authority retained by DPIRD Fisheries under the FM Act, and Auskelp's commitment to good-faith commercial engagement with directly-affected fishers — supports a finding that commercial fishing impacts have been assessed, are acknowledged, and are subject to a consultation and mitigation framework appropriate to the significance of the established commercial fishing activity in Disaster Bay.

4.17 Recreational Fishing

Description of the category

This category captures matters raised regarding the impact of the Project on recreational fishing in Disaster Bay, including the displacement of established recreational fishing within the lease area, the loss of a known winter southerly-wind-protected fishing ground, and broader concerns about the Project's effect on fish abundance.

Number of submissions in support: 0.

Number of submissions in objection: 13 (Public).

Number of submissions providing comment: 1 (Public).

Representative quotes — Objection / Comment

"Disaster Bay and Nadgee areas are home to several hugely popular fishing spots and the impacts of this pollution could be very widely spread." — Archie Beattie (Footscray, Vic)

"The area over the proposed lease is a fishing ground for local recreational fishermen and offers protection through winter from a southerly wind." — Anonymous (Wonboyn, NSW)

"Wonboyn is renowned for its fishing, its serenity, and its untouched wilderness." — Anonymous (Wonboyn, NSW)

"We do not object to the Kelp farm being established but we do not wish to lose any available fishing areas." — Peta Geraghty, Eden Kingfish Pty Ltd (Eden, NSW) [Comment]

RESPONSE

Auskelp acknowledges that recreational fishing is a deeply valued part of life on the Far South Coast of New South Wales. For many submitters, fishing in and around Disaster Bay is not merely a pastime but a generational tradition — a continuous connection to place, to family, to the bay itself, and to the slower rhythm of life that this stretch of coast represents. Auskelp respects that, and approaches recreational fishing matters with that recognition front and centre. Fishing from beaches will not be affected.

Recreational fishing is permitted within the lease area

Under NSW aquaculture legislation, marine aquaculture leases are not exclusive-use zones. Recreational fishers retain lawful access to enter, navigate through, anchor within, and fish within the lease area. The position is expressly recorded in the EIS at Section 9.2.4:

> "Recreational fishers will not be excluded from entering or using the 200-hectare Project area. Public access will remain unchanged, and recreational fishing can continue throughout Disaster Bay so long as vessels and lines do not connect to, interfere with, or moor to the kelp farm infrastructure."

The single operational restriction is that fishing vessels, lines, anchors and gear must not connect to, interfere with, or moor to the kelp farm infrastructure (the longlines, buoyancy floats, navigation markers, or mooring lines). This is a standard safety requirement that applies to all fixed marine installations — including the Wonboyn Lake oyster leases, the Twofold Bay mussel farms, and offshore aquaculture operations throughout NSW — and is in place to protect both the recreational fisher and the infrastructure. Net fishing and commercial longline fishing within the Kelp Farm boundaries are restricted (refer EIS Risk Table 7), but line fishing for recreation, drift fishing, and trolling around the perimeter and through the open-water corridors within the lease area remain permitted, subject to that single non-interference requirement.

While the lease area remains open to recreational fishing, the practical level of recreational use within the lease footprint has been historically low. Drift fishing for flathead is historically done on the north side of Disaster Bay, where the currents are pushing seaward. The site selection process documented at EIS Section 3.5 specifically identifies that the lease area is not regularly used by recreational line fishers (although it can occur from time to time), and the area is characterised by unconsolidated sandy substrate with low structural complexity — conditions that do not support the rocky-reef-associated species (snapper, morwong, wrasse, kingfish) that recreational anglers typically target on this coast. The locations of greatest recreational value to local anglers — the rocky headlands at Green Cape, the inshore reefs at the margins of the bay, the Wonboyn Lake estuary and bar, and the inshore zones supporting drift fishing — are generally outside the lease footprint. Two factors further limit recreational use of the specific lease area:

- Limited access via the Wonboyn Lake bar. The Wonboyn Lake bar is a notoriously difficult and weather-dependent crossing. It is regularly closed by swell, weather and tide. For much of the year,

the bar restricts the volume of recreational vessel-based fishing in the open ocean section of Disaster Bay, and the proposed lease area is in that open ocean section.

- Long distance from Eden. The lease area is more than 4.4 km from the nearest public launch point at Wonboyn and approximately 25 km south of Eden by water — a substantial transit for a recreational vessel, undertaken only on favourable weather days. Most recreational fishing originating from Eden focuses on closer-in waters around Twofold Bay, Two-Mile Reef, Pinnacle, and the inshore reefs. The EIS describes the area as "a low-use maritime zone, more than 4.4 km from the nearest public launch point (Wonboyn) and not part of established recreational boating routes" (EIS Section 9.2.4).

Aggregation effect of aquaculture infrastructure

Aquaculture infrastructure within high-energy offshore settings is widely known to support fish aggregation around the structure — observed in mussel aquaculture in Twofold Bay, Jervis Bay and Port Stephens, and consistent with international experience for offshore aquaculture (EIS Section 9.4.1). The Project may, at certain times of the year enhance the fish-abundance profile of the lease area itself and the surrounding waters. Because recreational fishing is not excluded from the lease, recreational anglers are positioned to benefit from any aggregation effect generated by the infrastructure. The Project is not represented as a substitute for natural reef habitat (refer Section 4.5), but its operational profile is consistent with the experience of comparable aquaculture in supporting nearby fish populations.

Co-existence with established recreational uses

Recreational boating, fishing, diving and other water-based activities can continue across the entirety of Disaster Bay, including within the lease area. The IALA-compliant lease marking and Notice to Mariners regime (refer Section 4.15) provides clear identification of the longline infrastructure to recreational vessels.

Assessment Outcome

Recreational fishing matters are addressed at EIS Section 7.16 and 9.2.4, with mitigation set out in Risk Tables 7, 10 and 24. The lawful continuation of recreational fishing both within and outside the 200-hectare lease area; the absence of any shore-based exclusion; the maintained access to the Wonboyn Lake and Merrica River entrances; the recognition that historically the specific lease area has been rarely fished, restricted Wonboyn Lake bar access, and distance from Eden; the potential fish-aggregation effect supporting fishing within and around the lease; and the IALA-compliant marking and signage framework — together support a finding that recreational fishing impacts are minimal. Auskelp respects the importance of recreational fishing to the local community and to visitors, and the Project has been designed to coexist with continued recreational use of the bay, including continued recreational fishing within the lease area itself.

4.18 Social and Economic

Description of the category

This category captures matters raised regarding the social and economic impacts of the Project, including direct and indirect employment opportunities, contribution to the regional economy, and alignment with NSW and Commonwealth aquaculture, seaweed industry and Blue Economy policy objectives. Matters raised also include potential impacts on the local tourism industry, the established character and identity of Eden, Wonboyn and the broader Far South Coast, and concerns regarding private commercial use of public marine waters, including perceptions relating to private benefit, foreign ownership and access. This category further considers workforce housing and accommodation impacts, broader community wellbeing and the alignment of the Project with regional economic transition following multiple historical industry contractions.

Number of submissions in support: 22 (15 Public, 7 Organisation).

Number of submissions in objection: 102 (98 Public, 4 Organisation).

Number of submissions providing comment: 2 (Public).

Representative quotes — Support

"I am writing to express my strong support for the proposed kelp farm development in Eden. As a local resident, this project represents not only an exciting new industry, but a genuine opportunity to secure a stronger future for our community, and our families. One of the greatest challenges facing towns like Eden is the lack of sustainable long term employment. Too often, our young people finish school and are forced to leave in search of work elsewhere. This has a ripple effect on families, communities, and the local economy." — Andre Robert (Eden, NSW)

"My company exports and processes Sea Urchins in Pambula. This new Seaweed farm has major potential for both domestic and export markets … This product would have serious economic value to the region and would bring in export dollars as well as regional employment. This is a win win for the region and the environment." — Ryan Morris, South Coast Sea Urchins (Lilyfield, NSW)

"The RCC actively supports the Auskelp proposal to establish a seaweed farm off the coast of Disaster Bay, creating an industry that will produce healthy food and other products (such as an additive to fertiliser), is good for the environment and will create jobs in this regional community." — Andrew Taylor, Regional Circularity Cooperative & Bega Circular Valley (Bega, NSW)

"AusKelp had done the work to ensure valid ESG credentials and kelp farming brings so much benefit to the region, including Ecological, Social and Societal benefits. The NSW Government has already identified the need to develop the seaweed farming industry and AusKelp has done the hard work to establish an industry venture and is a global leader in cultivation of Golden Kelp." — Marcus Jowsey (Pambula, NSW)

"The Mar2026 proposed EIS indicates it is well planned and offers an enormous long-term benefit to the area, the state, the nation, and the world." — Leigh Hemingway (Elwood, Vic)

"When shipping lanes tighten, Australian farms, pharmacies and factories feel it first. A farm doesn't save a forest, but it builds the people, hatcheries and field experience we'll need when restoration stops being optional." — Sacha McMonagle-Ihasz (Richmond, Vic)

Representative quotes — Objection

"I'm under no illusion that this is just an elaborate way for a couple of people to make a lot of money at the expense of a pristine coastline of outstanding beauty, so that they can live comfortably elsewhere." — Paul Wilkinson (Yarrambat, Vic)

"The lease could be sold to foreign entities." — Anonymous (Wonboyn, NSW)

"With more and more development happening on the pristine coastlines of NSW we are at risk of … turning the environment into industrial locations that damage the ecosystem and repel tourism and the communities that steward this area." — Anonymous (Lakes Entrance, Vic)

Agency Review

As requested by DPHI, further information requested regarding circular economy and Kelp industry life cycle of operation — including mapping of sector models and SSD scope identified. Responses to these matters are addressed in the following section (click to view):

Section 5.13.14 Kelp Industry Sector Model and Value Chain

RESPONSE

Auskelp acknowledges the depth and breadth of the social and economic matters raised in submissions, and recognises that this category includes both strong support for the Project — particularly from local Eden residents, regional industry operators, and the established commercial seafood sector — and substantial objections grounded in concerns about regional identity, tourism, private profit, and the alienation of public marine waters. The response below sets out the regional economic context within which the Project is proposed, the specific contribution the Project makes, and the policy framework within which the Project sits.

The Project should be considered within the actual economic position of Eden and the broader Bega Valley Shire. The region has experienced sustained economic contraction across each of its three historical primary industries:

- **Commercial fishing**. The Eden tuna cannery — for fifty years one of the major employers in the region — closed in 1999 with substantial job losses. The Eden commercial fishing fleet, while still active and a foundational part of Snug Cove, has progressively declined in scale and crew numbers over the subsequent two decades (EIS Sections 1.1 and 7.19).
- **Forestry**. The timber sawmill in Eden closed in 2020, with the operator citing an inability to economically process sawlogs. The Eden woodchip export facility continues to operate under a Wood Supply Agreement expiring in 2033, but the broader forestry transition currently underway in NSW (including native forestry restrictions and the establishment of the Great Koala National Park, and changing market conditions for native hardwood) places the long-term future of forestry employment in the region under significant pressure.
- **Aquaculture**. Mussel aquaculture in NSW — including operations in Twofold Bay — has experienced sustained production challenges due possibly to climate change effects. The Wonboyn Lake and Merimbula oyster industry continues as a stable and valued contributor to the local economy, but is not capable of replacing the employment losses associated with the broader contractions in fishing, forestry, and timber processing.

To this must be added the impact of the 2019–20 Black Summer bushfires themselves, which destroyed 448 houses in the Bega Valley Shire and burned approximately 365,000 hectares — 58% of the shire's total land mass (Bega Valley Shire Council, 2024). The bushfires placed direct pressure on the regional economy, on housing affordability, on the workforce, and on the broader community.

The result is that Eden and the Bega Valley Shire have an acute and well-documented need for sustainable, climate-resilient industries that diversify the economic base, create quality regional employment, retain young people in the community, and provide a counterweight to the loss of historical industries. This is the context within which the Project is proposed. It is the context articulated by many in support of the Project, and it is the context recognised in the Bega Valley Shire Council's *Funding our Future* strategy.

While the submissions lodged in support during the exhibition period were fewer than those objecting, the Project has strong and continuing local support in its day-to-day operations. There are simply too few jobs in Eden and on the south coast of NSW, and too few options. Auskelp regularly receives regular and ongoing unsolicited approaches from prospective employees — including marine biologists, marine engineers, postgraduate students and young people seeking marine apprenticeships.

The Bega Group (formerly Bega Cheese Limited) is the largest employer in the Bega Valley and one of the most significant employers on the Far South Coast of New South Wales. Auskelp was particularly pleased to receive a submission in support of the Project from Mr Barry Irvin AM, Executive Chairman of the Bega Group. Mr Irvin stated that "Bega Group actively supports the Auskelp proposal to establish a seaweed farm off the coast of Disaster Bay," noting that the business "will provide significant jobs, economic stimulation and a new innovative and sustainable industry for the Eden area and the Bega Valley."

<u>The Project's direct contribution</u>

The Project's direct contribution aims are documented in EIS Sections 1.1, 1.2, 7.19, 7.20, 9.3.6 and 11. Specifically:

- The offshore operation the subject of this application supports approximately 14–18 direct FTE positions, spanning vessel operations, farm deployment and maintenance, hatchery services, environmental monitoring and management (refer Section 5.13.12). Across the full Project, including future downstream processing and product development that do not form part of this application, direct employment is expected to reach approximately 30 FTE, with additional indirect and induced employment in the regional supply chain.
- Production of more than 1,500 tonnes of wet seaweed annually at commercial scale.
- Direct economic value of more than $9 million per annum in product value, with additional economic value generated through processing, biostimulant production, supply-chain integration and export.

- Use of existing port and industrial infrastructure at Snug Cove and the Edrom precinct — including infrastructure originally established to support fishing and forestry that is now underutilised following the closure of the Eden tuna cannery and the contraction of the commercial fishing and forestry sectors (EIS Section 1.1).
- Aboriginal employment and procurement pathways, with strategies to promote inclusive employment and local procurement (refer Section 4.20).
- Workforce capability building through partnerships with the Marine Bioproducts Cooperative Research Centre (MBCRC), the Australian Sustainable Seaweed Alliance (ASSA), and the Bega Circular Valley initiative.
- the Project is largely resilient to drought, fire and floods, addressing key risks associated with the 2019–20 bushfires and subsequent climate-driven pressures on terrestrial industries.

NSW policy alignment

The Project aligns directly with the following NSW strategic frameworks (EIS Sections 5.1 to 5.3, and Section 11):

- the NSW Seaweed Prospectus 2024 — the global market opportunity for New South Wales (NSW) seaweed is estimated to be worth between A$900 million and A$2.3 billion, and explicitly identifies offshore kelp aquaculture in regions such as Eden as a strategic priority;
- the NSW Aquaculture Industry Development Strategy 2017;
- the NSW Marine Waters Sustainable Aquaculture Strategy (MWSAS) — under which Lease AL21/004 is assessed against the MWSAS Constraints Criteria;
- the NSW Marine Estate Management Strategy 2018–2028;
- various NSW Regional Development Plans, including: Far South Coast Regional Economic Development Strategy (2023 update) and, South East and Tablelands Regional Plan 2036.

The Project is recognised by these frameworks as the type of regional, sustainable, climate-resilient, export-capable industry that the NSW Government have explicitly identified as a priority for regional economic transition.

Tourism — the Project does not displace tourism

Several submissions express concern that the Project will harm tourism in the region.

Auskelp addresses this as follows:

- The Project does not introduce any new land-based infrastructure within tourism-sensitive areas (refer Section 4.4). Greenglades Beach, Wonboyn Beach, Nadgee Nature Reserve, Beowa National Park (including the Light to Light Walk), Green Cape Lighthouse, and the wider tourism-attracting coastline remain unaltered.
- The Project's visual presence is offshore, sub-surface for the majority of infrastructure, and located 1.1 km offshore (refer Section 4.11). It is not visible from any residential location (for more information see Section 5.13.1).
- Eden's whale-watching industry operates predominantly in and around Twofold Bay, the recognised whale aggregation area (refer Section 4.6) — not in Disaster Bay. The Project does not interfere with the whale-watching industry's operating area.
- The Project's vessel-movement profile (0-3 trips per day, daylight, predominantly during operational seasons) is materially lower than existing maritime activity in the region and does not introduce a noticeable tourism-disruptive presence.
- Cruise ship operations have previously reached out to Auskelp seeking to add kelp to their onboard cuisine (for vessels berthing in Eden).

- The Project provides a new category of regional tourism interest — sustainable seaweed aquaculture is an emerging "educational tourism" sector in jurisdictions with comparable operations (Maine, New Brunswick), and the Project offers potential for visitor education programs through the partnerships with the MBCRC.

The position that the Project will damage tourism is not supported by the visual, locational or operational profile of the development. The Project is consistent with the broader tourism positioning of the Sapphire Coast as a region offering both natural environment and sustainable industry experience.

Ownership, profit and the "private benefit" concern

Several submitters raise concerns regarding private profit from public marine waters, and the potential for the lease to be sold to foreign entities. Auskelp responds directly:

- Auskelp is an Australian-owned, NSW-domiciled company (ABN 33 644 315 613 with multi-generational family connection to the locality (EIS Section 1.1).
- All commercial aquaculture in NSW — including the well-accepted oyster industry at Wonboyn Lake, the mussel industry at Twofold Bay, and other aquaculture operations across NSW — operates under private ownership using public marine waters under DPIRD Fisheries aquaculture leases. The lease framework is the same statutory framework that applies to the existing aquaculture operations in the locality that submitters value.
- Commercial fishing in NSW marine waters is undertaken by privately-owned businesses operating for private profit, under FM Act entitlements that grant the right to take a public fisheries resource from public marine waters. The position that private commercial use of public marine waters is inherently inappropriate is not consistent with the long-established regulatory framework under which the commercial fishing and aquaculture industries already operate in these same waters.
- Any transfer or sale of the lease and aquaculture permit is subject to DPIRD Fisheries consent under the *Fisheries Management Act 1994* (NSW) — the Project's ownership cannot be transferred to a foreign or any other entity without DPIRD Fisheries' approval. Foreign Investment Review Board approval may also apply depending on the nature of any proposed acquisition.
- The Project commits to local employment, local procurement, and local supply chains as a core operational principle (EIS Section 1.1) – a benefit independent of ownership. The economic benefits of the Project are designed to accrue to the local and regional economy.

Business Development

It is important to be candid with the consent authority and the community about a feature of the Project that may not be obvious: there is no guarantee that this Project will succeed commercially. The Project is not a low-risk extraction of an established commercial resource. It is the development of an entirely new environmentally-friendly commercial industry in Australia, undertaken at significant private financial risk by the Proponent, with a multi-decade investment horizon and outcomes that will only be known many years into operation.

Several features of the commercial position warrant honest acknowledgement:

- *Ecklonia radiata* has no established commercial cultivation industry anywhere in the world. The international kelp aquaculture industries that submitters and assessors may be familiar with are based on different species — predominantly *Saccharina latissima* (sugar kelp) in the North Atlantic, *Laminaria japonica* in Asia, and *Macrocystis pyrifera* (giant kelp) in cooler southern hemisphere waters. The processing pathways and product markets for *Ecklonia radiata* must be developed from first principles within Australia.
- The history of kelp aquaculture globally is one of long and sustained industry development. Early commercial kelp aquaculture programs in California, Washington State, New York and the Gulf of Maine in the 1980s and early 1990s did not result in sustained commercial production. The US Marine Biomass Program was discontinued in 1986 after failing to achieve commercial viability. Commercial kelp cultivation in the United States effectively restarted after 2010, and today the sector, while

growing, remains small relative to other aquaculture industries. Australia's emerging seaweed industry — comprising a very small number of startups across multiple species — is an early stage development with relative uncertainty.

- To be commercially viable, kelp produced from Disaster Bay will need to be processed through to end-use products — food, agricultural biostimulants, nutraceutical ingredients, animal feed supplements — in markets that do not yet exist at scale for this species (see Section 5.13.14 – Kelp Industry Sector Model and Value Chain). The Project is therefore not only a cultivation project; it is also a market-development project, a processing-infrastructure project, and an industry-building project, undertaken in collaboration with the Marine Bioproducts Cooperative Research Centre, the Australian Sustainable Seaweed Alliance, and Australian academic and industry partners.
- The Project will require sustained capital investment, sustained research and development, and policy support over a multi-decade horizon. The Proponent enters this investment on the basis of more than six years of preparatory (work since 2019), more than three years of ocean testing, and a long-term commitment to the locality — not on the basis of short-term financial return.

The Project is a high-effort, high-risk, long-horizon business venture in an industry that has not yet been established in Australia at commercial scale. The Proponent is undertaking it because of a combination of commercial conviction and a sense of moral obligation to the Bega Valley locality in which the Proponent's family has been a part for multiple generations. The Proponent's view is that the broader regional economic transition (refer above), the documented decline of wild kelp forests under climate-driven pressure (refer Section 4.5), the demonstrated agricultural and environmental potential of seaweed biostimulants (refer Section 4.9), and the strategic value of building Australian sovereign capability, together constitute a reason to attempt this investment notwithstanding the commercial risk.

Wonboyn village character and workforce housing

The Project does not require new residential or accommodation development within the Wonboyn locality. Workforce accommodation will be sourced from existing housing stock in Eden, Pambula, Merimbula and surrounding settlements, consistent with the established workforce-accommodation arrangements of other regional industries. The Project does not introduce a "fly-in fly-out" or construction camp model. The character of the Wonboyn village, including its approximately 100 homes, is not altered in any way by the Project (refer Section 4.4).

Bega Valley Shire Council position

Bega Valley Shire Council (BVSC), as the local government authority, has confirmed no further issues with the Project in its formal agency advice, and ongoing discussions with BVSC generally indicate strong support for the Project. This is a material indicator that the social and economic impacts of the Project are not regarded by the local government as raising matters of concern beyond those that have already been addressed through the EIS and the consultation framework.

Assessment outcome

Social and economic matters are addressed at EIS Sections 7.19 (Social and Economic), 7.20 (Social Impact Assessment), and 9.3.6 (Social and Economic Impact Assessment), with mitigation set out in Risk Tables 10, 14 and 24. Project justification is documented at EIS Section 11. Overall, the Project is determined as being net positive to the region on a social and economic basis, with a risk profile remaining low.

The combination of (a) the regional economic context — multiple industry contractions, post-bushfire recovery pressure, sustained youth out-migration, and explicit policy identification of sustainable aquaculture as a priority regional industry; (b) the Project's direct contribution — approximately 30 local jobs, export potential, and supply-chain integration; (c) alignment with the NSW Government Policies and Plans and the NSW Seaweed Prospectus; (d) the absence of any displacement of the regional tourism industry; (e) long-term regional and environmental investment rather than a short-term commercial extraction, and; (f) delivers a well-targeted social and economic benefit to a region with a well-documented need for the kind of sustainable, climate-resilient, export-capable industry the Project represents.

4.19 Mental Health

Description of the category

This category captures matters raised regarding the impact of the Project on the mental health and wellbeing of the Wonboyn, Eden and broader Bega Valley community. Submissions in this category reference the role of Disaster Bay, Nadgee Nature Reserve, and the wider unspoilt coastline as a place of personal restoration, sanctuary and peace of mind, and express concern that the introduction of the Project will diminish or remove that role. Some submissions also reference anxiety regarding specific operational risks of the Project — including the potential for storm-cast kelp to wash into the Wonboyn Lake entrance. The category is treated with particular sensitivity, recognising that the matters raised reflect deeply personal connections to place.

Number of submissions in support: 0.

Number of submissions in objection: 21 (20 Public, 1 Organisation).

Number of submissions providing comment: 0.

Representative quotes — Objection

"This is an untouched, pristine, unaltered, tranquil place, a sanctuary — these are all words across websites and information boards across Disaster Bay." — Anonymous (Wonboyn, NSW)

"I am disturbed and distressed by the submission to create a kelp farm at Disaster Bay." — Anonymous (Brunswick East, Vic)

"Please refer to the attached objection document which covers my key areas of concern: non adherence to current best ocean practice, lack of community consultation, visual amenity, sanctuary and mental health." — Anonymous (Wonboyn, NSW)

"Significant anxiety exists regarding the potential for storm events to wash excessive kelp and sand into the Wonboyn Lake entrance, which would disrupt the hydrological balance essential for oyster cultivation." — Anonymous (Tinamba, Vic)

RESPONSE

Auskelp acknowledges the deeply-held place-based connections expressed by submitters in this category. The Wonboyn locality, Nadgee Nature Reserve, Greenglades Beach, and Disaster Bay clearly hold meaningful significance for many — as a place of restoration, quiet, personal reflection, family memory, and ongoing wellbeing. Those connections are valued by Auskelp, and the Project has been designed with that significance in mind.

Project design supports continued place-based wellbeing

The features of the Project that protect the broader experience of the coastline — the 1.1 km offshore separation, the sub-surface infrastructure, the absence of any new land-based footprint within the Wonboyn locality or Nadgee Nature Reserve, the low and intermittent vessel-movement profile, and the full reversibility of the development through the Decommissioning Plan — together support the continuation of the personal, family and community connections to place that submitters describe. The character of the onshore coastal experience at Wonboyn, Greenglades and along the Light to Light Walk is not displaced by the Project (refer Sections 4.4, 4.10 and 4.11).

Ongoing mental health

Auskelp respectfully invites objectors and assessors of this Project to acknowledge a dimension of regional mental health and wellbeing that is sometimes under-weighted in environmental assessment processes: the mental health and wellbeing cost of the sustained absence of meaningful local employment, of seeing young people forced to leave the region for work, and of a community that struggles to find an industry it can build, stand behind, and take pride in.

The Far South Coast has, over recent decades, lost the Eden tuna cannery (1999), the largest Eden timber sawmill (2020), a significant share of the commercial fishing fleet, and elements of the regional forestry

workforce, while bearing the disproportionate impact of the 2019–20 Black Summer bushfires (refer Section 4.18). The cumulative effect of those losses is not only economic — it is psychological. Sustained regional under-employment, the out-migration of young people, the loss of intergenerational career pathways, and the absence of new industries with which a community can identify are documented contributors to community-level mental health stress, social fragmentation, and the loss of community pride (Fraser et al., 2005; National Rural Health Alliance, 2021; Australian Institute of Health and Welfare, 2024).

The same locality demonstrates the counter-point clearly. The Wonboyn Lake oyster industry is, for many in the community, a source of immense local pride. It is an industry that the locality has built, supports, and identifies with. Generations of Wonboyn families have grown up around the oyster industry, and the community speaks of it not in apologetic terms but in terms of belonging. That identification is one of the quiet contributors to the wellbeing of the locality — the sense that this place produces something, that this place has a working life, that this place is *known* for something its people have built.

Auskelp's hope — offered respectfully and acknowledging the genuine reservations of submitters in this category — is that kelp farming at Eden-1 could, over time, become a source of comparable regional pride. A globally significant, locally based, environmentally regenerative industry built in a small Far South Coast community that has been told for decades that its working life is in decline.

What the Eden region needs is jobs that stay in the region, young people with a reason to stay, and a working coastline that produces something the community can stand behind. The sustained loss of local industry — and with it, the steady out-migration of young people in search of work elsewhere — carries a cost that is not only economic but social. A new, sustainable industry that creates lasting local employment, keeps families together, and gives the region something it can be proud of is, in its own right, a contribution to the long-term mental health and wellbeing of the community.

The existing place identity of Wonboyn includes commercial marine industry

The place identity of Wonboyn — the identity that submitters describe as a source of restoration, sanctuary and personal wellbeing — has been formed over decades alongside, and in part because of, an active marine industry presence. The Wonboyn Lake oyster industry has operated in the immediate locality for decades. Commercial fishing, recreational fishing, and the broader maritime working life of the Far South Coast — including the Eden fishing fleet, the abalone and sea urchin diving industries, and historically a substantially larger commercial fishing presence at Snug Cove — have been continuous features of the local seascape throughout the period in which the locality has come to be valued as a place of personal restoration.

The community's connection to place at Wonboyn has not been diminished by the presence of the established oyster industry, the daily vessel movements on Wonboyn Lake, the synthetic-rope-and-buoy infrastructure of those operations, or the working maritime activity of the Eden fishing fleet. On the contrary, those commercial marine activities are widely regarded as part of the character of the place. The Project, located much further offshore, with no land-based footprint, with a far smaller visible surface presence than the oyster industry, and with a passive operational profile, sits within that established coexistence between place-based wellbeing and commercial marine industry.

Addressing the Wonboyn Lake entrance concern

Auskelp acknowledges and respects the specific concern raised regarding the potential for storm events to wash kelp into the Wonboyn Lake entrance, with consequences for the oyster industry and the hydrological balance of the lake. Auskelp responds directly:

- Kelp loss from the Project is not anticipated to occur at scale, refer Section 4.7.
- Wonboyn Lake hydrodynamics are governed by natural processes. The lake entrance is subject to continuous tidal exchange, swell-driven sediment transport across the bar, and lake outflow — natural coastal processes that operate independently of the Project's offshore location 1.1 km from the open coast (refer Section 4.12).
- Wild storm-cast kelp washing into the Wonboyn Lake entrance is a long-established natural process. Storm-cast wild kelp on the beaches and estuary entrances of the Far South Coast —

including the Wonboyn Lake bar — is a long-established natural phenomenon and an ecological function of the wider kelp-forest ecosystem (refer Section 4.8).

- Continued protection of the Wonboyn oyster industry is in Auskelp's interest, not against it. The Wonboyn oyster industry is an established and valued local industry, and the Project has been designed and located with the explicit intent of operating without interference with the lake hydrodynamics or oyster cultivation environment.

Climate change as a longer-term wellbeing risk

The connection between climate change — including rising ocean temperatures, marine heatwaves, ocean acidification, algal blooms, and the loss of foundation marine ecosystems — and mental health is now well documented in peer-reviewed literature. Coastal communities along the NSW Far South Coast are particularly exposed, given the documented status of the south-east Australian ocean region as one of the fastest-warming marine zones globally (refer Section 4.5), and the impact of the 2019–20 Black Summer bushfires on the regional community. The progressive loss of wild kelp forest, the changes to species composition, the increased frequency of climate-driven marine events, and the broader sense of ecological loss carry recognised mental health and wellbeing consequences. The longer-term mental health and wellbeing of communities with deep place-based connections to the coastline is, in part, dependent on the long-term survival of the marine ecosystems with which those communities are connected. The Project contributes to the cultivation, hatchery and research capacity required to support those ecosystems under climate-driven pressure (refer Sections 4.5 and 4.9).

Assessment Outcome

Mental health and wellbeing matters are addressed within the Social Impact Assessment at EIS Section 7.20, with the broader social and economic framework set out at EIS Sections 7.19. The combination of the Project's design features that preserve continued community access to and enjoyment of the coastline; the recognition of regional under-employment, youth out-migration, and the absence of a unifying regional industry as legitimate mental health considerations in their own right; the long-established coexistence of valued community wellbeing with commercial marine industry in the locality; the engineering and locational evidence that addresses the Wonboyn Lake entrance concern; the longer-term contribution of the Project to climate resilience of regional marine ecosystems; and the acknowledgement of submitters' place-based connections — together support a finding that the Project has been designed and located with appropriate regard to community mental health and wellbeing.

4.20 Aboriginal Heritage

Description of the category

This category captures matters raised regarding the impact of the Project on Aboriginal cultural heritage, including tangible and intangible heritage values of Disaster Bay, Greenglades, Baycliff and the surrounding land- and sea-scape; the adequacy and depth of Aboriginal consultation undertaken for the EIS; the status and methodology of the Aboriginal Cultural Heritage Assessment Report (ACHAR); engagement with the Eden Local Aboriginal Land Council and relevant Registered Aboriginal Parties; the significance of the area as Yuin and/or Bidawal Sea Country; and the relationship between the Project and the unresolved native title position. Several submissions also reference the potential for onshore works and any upgrade of existing access tracks to affect recorded or potential Aboriginal cultural sites in the Greenglades/Baycliff area.

Number of submissions in support: 1 (Public).

Number of submissions in objection: 33 (30 Public, 3 Organisations).

Number of submissions providing comment: 0.

Representative quotes — Objection

"I am also very concerned that the Local Aboriginal Land Council has not been adequately consulted for such a sacred site in the community, again the process failing to provide meaningful engagement." — Anonymous (Wonboyn, NSW)

"Of particular concern is the intimation that the Aboriginal Cultural Heritage Assessment (ACHA) Report is fully supportive of the project whereas in reality it is a desktop review, with minimal input from relevant Aboriginal stakeholders." — Marika Neustupny (Fitzroy, Vic)

"Inadequate Indigenous consultation: Ongoing consultation with Traditional Owners is claimed throughout the EIS… The Independent Planning Commission should review the consultation." — Jane Skelton (Faulconbridge, NSW)

"There are also significant indigenous cultural sites in the Greenglades/ Baycliff areas which could also potentially be impacted by this proposed project and any upgrade of the existing track network." — George Malolakis (Pambula Beach, NSW)

"The proposed 200-hectare lease sits… on Yuin and/or Bidawal sea Country with an unresolved Native Title position, in a community where the engagement record contains material inconsistencies…" — Anonymous (Merimbula, NSW)

Agency Review

DPHI has requested evidence demonstrating that consultation with Registered Aboriginal Parties (RAPs) continued following completion of the Aboriginal Cultural Heritage Assessment Report (ACHAR) in 2024, consistent with Heritage NSW consultation guidelines and the ACHAR recommendation for regular ongoing engagement and project updates, including specific engagement with Eden Local Aboriginal Land Council. Responses to these matters are addressed in the following section (click to view):

Section 5.13.8 Engagement with Aboriginal Parties

RESPONSE

Auskelp acknowledges the Traditional Owners of the adjoining coastal lands and waters on which the Project is proposed — the (Bidawal/Bidwell) People whose lands extend from Green Cape in NSW, across the NSW-Victorian border to Point Hicks. Auskelp also acknowledges the Yuin People whose Country extends from the NSW Far South Coast to north of Wollongong in NSW, and the other Aboriginal groups with historical and contemporary connections to this region. Auskelp pays respect to Elders past, present and emerging of all of those groups.

Auskelp acknowledges that, while the Aboriginal Cultural Heritage Assessment found a low likelihood of tangible Aboriginal objects surviving within the high-energy offshore lease area, the broader Sea Country and adjoining landscape are highly likely to hold intangible Aboriginal cultural heritage values, and Auskelp respects and recognises those continuing values.

The response below sets out the consultation undertaken to date, the findings of the Aboriginal Cultural Heritage Assessment Report. It also responds to submitter concerns about consultation adequacy, the post-exhibition technical work commissioned in response to Heritage NSW advice, and the framework for continuing engagement.

No inference of Aboriginal support

Auskelp confirms the EIS does not claim, and has never claimed, that the Project has the support or endorsement of the Aboriginal community, of any Local Aboriginal Land Council, or of any Registered Aboriginal Party. The EIS documents the *consultation and engagement* undertaken through the Aboriginal Cultural Heritage Assessment Report process — the identification of, and formal ongoing engagement with, Aboriginal parties with cultural connection to the area. Where the EIS refers to ongoing engagement with Registered Aboriginal Parties and to commitments to continued First Nations engagement, those statements describe a consultation process, not an endorsement of the Project.

Aboriginal Cultural Heritage Assessment Report (ACHAR)

A formal Aboriginal Cultural Heritage Assessment Report (ACHAR) was prepared for the Project by Biosis Pty Ltd and completed on 30 July 2024. The ACHAR is provided as EIS Appendix A5 and forms the primary technical basis for the Aboriginal cultural heritage assessment of the Project (EIS Section 6.4 and Section 7.18.1). The ACHAR was prepared in accordance with the *NSW Aboriginal Cultural Heritage Consultation*

Requirements for Proponents 2010, the *NSW Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW 2010*, and the *NSW Aboriginal Cultural Heritage Standards and Guidelines Kit*.

The ACHAR consultation process included:

- comprehensive desktop review of the Aboriginal Heritage Information Management System (AHIMS) database managed by Heritage NSW, ethnographic records, historical sources, and previous regional heritage studies;
- identification of all known and relevant Aboriginal parties with potential cultural connections to the Project area, through statutory registers, Land Council records, Native Title searches, and public notification;
- formal contact with and invitation to participate from nineteen (19) Aboriginal groups and organisations registered as Registered Aboriginal Parties (RAPs), including the Eden Local Aboriginal Land Council, the Eden Aboriginal Corporation, the Bega Local Aboriginal Land Council, the NSW Aboriginal Land Council, the Katungal Aboriginal Corporation, and other individual First Nations representatives and groups, including those with Bidhawal connection;
- provision to RAPs of project information, methodology documentation, and opportunities to comment on the scope, findings and management recommendations of the assessment; and
- direct consultation with representatives of the Bega Local Aboriginal Land Council and traditional custodians.

The findings of the ACHAR concluded that no known Aboriginal cultural heritage objects or sites are recorded within the offshore footprint of the Project (EIS Section 7.18.1). The ACHAR also concluded that the broader Sea Country and adjacent landscape carry significant continuing cultural values, that the absence of recorded objects within the lease footprint should not be interpreted as absence of cultural significance, and that continued engagement and cultural monitoring throughout the lifecycle of the Project should be implemented.

Native Title position

The grant of an aquaculture lease under the *Fisheries Management Act 1994* (NSW) is administered with regard to Native Title interests by DPIRD Fisheries, in accordance with the *Native Title Act 1993* (Cth) and the *Native Title (New South Wales) Act 1994*. Auskelp confirms it will satisfy all statutory Native Title requirements prior to lease grant, including any future determination affecting the lease area. As at the date of this report, the Project lease area is not within a native title claim area: the lease lies outside (south of) the boundary of the registered South Coast People native title claim (NSD1331/2017) and is not subject to any current or determined native title claim. Auskelp notes that the absence of a registered Native Title claim does not determine cultural custodianship, which is recognised under separate frameworks including the *Aboriginal Land Rights Act 1983* (NSW) and the *National Parks and Wildlife Act 1974* (NSW).

Cultural Heritage Response Plan

In addition to the ACHAR, Auskelp has prepared a Cultural Heritage Response Plan (attached as Appendix RC5), reviewed by a registered Marine Archaeology Assessor, documenting the operational protocols in the event of European and Aboriginal cultural discoveries through construction, operation, and decommissioning.

Response to specific consultation concerns

Auskelp acknowledges that several submitters — including the Eden Local Aboriginal Land Council — have raised concerns regarding the adequacy of consultation with First Nations stakeholders. Auskelp takes these concerns seriously and responds substantively in Section 5.13.8, in the format and with the details requested by DPHI. Auskelp has made every effort to consult openly and honestly with Eden LALC, with the ongoing objective of meaningful collaboration throughout the regulatory approval process. Auskelp believes this fact is well established in the engagement records detailed in Section 5.13.8.

Statutory framework

The Project is subject to the *National Parks and Wildlife Act 1974* (NSW), the *Aboriginal Land Rights Act 1983* (NSW), the *Native Title Act 1993* (Cth), and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth). The ACHAR concludes that the Project does not require an Aboriginal Heritage Impact Permit under Part 6 of the NPW Act, on the basis that no known Aboriginal objects are present within the offshore lease footprint and the Project will not harm Aboriginal objects (EIS Sections 5.3.6, 5.3.7 and 9.3.3.1). The Cultural Heritage Response Plan establishes the operational protocol for the event that any previously-unrecorded Aboriginal object is encountered.

Continued engagement framework

The framework for continued Aboriginal engagement extends beyond the EIS exhibition and includes:

- ongoing consultation with Bidhawal, Yuin and other Aboriginal groups through the operational phase, including the Eden LALC, Eden Aboriginal Corporation, Bega LALC, NSW ALC, Katungal Aboriginal Corporation, and other RAPs;
- Aboriginal employment and procurement opportunities.

Beyond the formal ACHAR consultation process, Auskelp has maintained direct email contact with the Registered Aboriginal Parties consulted for the Project, on a per-RAP basis, in accordance with each RAP's request for engagement. Auskelp has provided regular updates on Project progress, including milestone updates, environmental assessment status, the EIS exhibition timeline, and the post-exhibition response. Auskelp acknowledges that the Project has taken substantially longer than originally anticipated to reach SSD assessment — a function of the rigour of the regulatory process, the depth of the technical work, the complexity of multi-agency consultation, and the Proponent's commitment to undertake the work properly. Auskelp has communicated each material change in timeline to the RAPs, and has made best efforts to maintain consistent contact.

Assessment Outcome

Aboriginal cultural heritage matters are addressed at EIS Sections 6.4, 7.18.1 and 9.3.3 and 9.3.3.1, supported by the ACHAR (EIS Appendix A5) and the Cultural Heritage Response Plan. The ACHAR concludes that no known Aboriginal cultural objects or sites are recorded within the offshore lease footprint, while recognising that the broader Sea Country and adjacent landscape carry continuing cultural values that warrant ongoing engagement and cultural monitoring.

Auskelp acknowledges with respect that the Eden Local Aboriginal Land Council and a number of public submitters have raised concerns regarding the consultation undertaken. Auskelp has heard these concerns, accepts that consultation is a continuing obligation rather than a discrete statutory step, and commits to sincere and continuing engagement with relevant First Nations groups. As requested by DPHI, details of Aboriginal consultation are provided in Section 5.13.8.

4.21 European Heritage

Description of the category

This category captures matters raised regarding the impact of the Project on historic, non-Aboriginal cultural heritage values associated with Disaster Bay, Greenglades, Wonboyn and the broader Far South Coast, including: the historic maritime heritage of Disaster Bay (the name itself reflecting recorded shipwreck events); the Green Cape Lighthouse and Cottages (located outside the Project footprint but within the wider regional historic-heritage landscape); the long-standing maritime use of Disaster Bay as a traditional anchorage and fishing ground; and the cultural-historical continuity that submitters describe as a value carried in the Bay itself. The category also incorporates the agency advice received from Heritage NSW (European and Maritime Heritage) requiring the preparation of a Maritime Archaeological Assessment by a suitably qualified maritime archaeologist and clarification of the wreck symbol identified in Figure 3 of the Biosis Aboriginal Cultural Heritage Assessment Report published in 2024.

Number of submissions in support: 1 (Public).

Number of submissions in objection: 14 (14 Public).

Number of submissions providing comment: 1 (Public).

Representative quote — Support

"This aligns well with Eden's long-standing maritime heritage and provides new opportunities for local workers seeking stable, future focused employment." — Anna Cooke (Pambula, NSW)

Representative quotes — Objection / Comment

"Also it's called Disaster Bay for a reason due to the significant storm events and seas that have wrecked many a ship in days gone by." — Anonymous (Newport, NSW)

"You must be reminded the name Disaster Bay came from ship wrecks." — Donald Ross (Wonboyn, NSW)

"Historically Disaster Bay, within the Beowa National Park, is not called Disaster Bay for no reason." — Anonymous (Woodend, Vic)

"Disaster Bay is not simply a fishing ground … [it is] a traditional maritime anchorage." — Michael Ballantyne, Licensed Fishing Business No. 450 (Greigs Flat, NSW)

"To place any infrastructure here — apart from the historic Greencape Lighthouse and Cottages — is a little like starting a quarry at Ayers Rock, at Uluru!" — Peter Cocker (Eden, NSW)

Agency review

Heritage NSW and DPHI have requested a Maritime Archaeological Assessment prepared by a suitably qualified maritime archaeologist, including review of side-scan sonar, seabed inspection and historical shipwreck records. Responses to these matters are addressed in the following section (click to view):

Section 5.13.9 Maritime Heritage

RESPONSE

Auskelp acknowledges the historical maritime character of Disaster Bay, the documented record of vessel losses across the Far South Coast, the presence of known historic shipwrecks within and adjacent to the proposed lease area, and the importance of Green Cape Lighthouse and Cottages to the regional historic-heritage landscape. The response below sets out the assessment undertaken at exhibition, the agency advice received from Heritage NSW (European/Maritime Heritage), the post-exhibition technical work commissioned in response, and the framework for management of European heritage values through operation and decommissioning.

In direct response to the advice of Heritage NSW (European and Maritime Heritage) and DPHI, Auskelp commissioned a Maritime Archaeological Assessment (MAA) from Cosmos Archaeology, prepared by suitably qualified and experienced maritime archaeologists (Cosmos Archaeology, *Eden-1 Kelp Aquaculture Farm — Maritime Archaeology Assessment*, June 2026, Job No. J26/15) – attached as Appendix RB6. It includes a review of maritime cultural heritage databases (the NSW Maritime Heritage Database and the Australasian Underwater Cultural Heritage Database), archival and historical research, and analysis of the side-scan sonar (SSS) survey data collected across the study area and found the potential for shipwreck remains to be low. This information further confirms and strengthens the position presented in the EIS that the risk of European heritage being affected, in conjunction with a Cultural Heritage Response Plan is negligible. Even if heritage items are discovered, the project can work around discovery areas as required.

Statutory framework

The Project is subject to the *Heritage Act 1977* (NSW), the *Underwater Cultural Heritage Act 2018* (Cth), and (in respect of any heritage-listed items) the *State Heritage Inventory* maintained by Heritage NSW. The Project is also subject to the heritage protection provisions of the *Environmental Planning and Assessment Act 1979* and the relevant State Environmental Planning Policies (EIS Section 5.3.1). The exhibited EIS assessment of European heritage matters is set out at EIS Sections 7.18.2 and 9.3.3.2.

Project location

The lease has been positioned and the longline infrastructure has been designed to avoid all known historic shipwreck locations. Where any previously-unrecorded wreck or wreck material is encountered during deployment, operation, or decommissioning, work will cease immediately in the affected area, Heritage NSW (European/Maritime Heritage) will be notified, and operations will not resume in that area until the relevant statutory authority has provided direction. These protocols are documented in the Maritime Archaeological Assessment provided at Appendix RB6 of this report and in the Environmental Management Plan.

Green Cape Lighthouse and Cottages

Green Cape Lighthouse, completed in 1883 and listed on the State Heritage Register, together with the associated Cottages, represents one of the most significant items of historic European heritage on the Far South Coast. The Lighthouse and Cottages are located onshore, well outside the Project's offshore footprint and outside the operational footprint of the Project at Snug Cove and the Edrom precinct (refer Section 4.4). The Project does not introduce any infrastructure into, or vehicle access through, the Green Cape historic precinct. The visual amenity assessment confirms that the Project's offshore infrastructure is not visible from any residential location and is consistent in scale and character with the existing maritime activity visible from elevated coastal viewpoints (refer Section 4.11).

Traditional anchorage and maritime use

Several submissions characterise Disaster Bay as a traditional maritime anchorage and a place of historical and continuing maritime use. Auskelp acknowledges this. The continued use of Disaster Bay as an anchorage by vessels seeking shelter from severe weather is addressed at Section 4.16 of this report.

The Disaster Bay name

Several submissions refer to the name "Disaster Bay" as itself a record of historic vessel loss in this stretch of coast. Auskelp accepts that observation. The Project's infrastructure has been engineered to the wave climate and storm conditions that produced those historic losses (refer Section 4.6), and the engineering profile of the longlines is designed for the 100-year return-period significant wave height of 7.15 m drawn from long-term Eden Waverider Buoy data (1978–2024). The Project does not contribute to maritime hazard in the bay; the IALA-compliant marking and AIS framework supports rather than diminishes the safety profile of the bay for transiting and sheltering vessels (refer Section 4.15).

Assessment Outcome

European heritage matters are addressed at EIS Sections 7.18.2, 9.3.3 and 9.3.3.2, supported by the Maritime Archaeological Assessment provided as Appendix RB6 of this report. The combination of the low to very low potential for shipwreck remains within the offshore lease footprint; the separation from known historic shipwrecks through positioning, seabed survey, underwater drone scans, a Cultural Heritage Response Plan with operational unexpected-finds protocols; the Maritime Archaeological Assessment by a qualified maritime archaeologist; the absence of any physical impact on Green Cape Lighthouse and Cottages; the maintenance of traditional maritime use of the bay; and the engineering of the infrastructure to the relevant storm climate of Disaster Bay — supports a finding that European heritage matters have been assessed correctly. Auskelp acknowledges the historic maritime character of Disaster Bay and respects the importance placed by submitters of the cultural-historical continuity.

4.22 Support Kelp Farming

Description of the category

This final category captures matters raised regarding support for kelp aquaculture as an industry. It includes direct support for the Project from public submitters, organisations and businesses, as well as conditional or qualified positions from submitters who object to this specific Project on the basis of location, scale, evidence base or process, but who nevertheless support kelp aquaculture in principle and do not oppose the development of the industry as a category of marine use.

Number of submissions in support: 22 (15 Public, 7 Organisation).

Number of submissions in objection: 64 Objectors SUPPORT kelp farming (62 Public, 2 Organisations)

Number of submissions providing comment: 3 (Public).

Representative quotes — Direct support

"AusKelp has done the work to ensure valid ESG credentials and kelp farming brings so much benefit to the region, including Ecological, Social and Societal benefits. The NSW Government has already identified the need to develop the seaweed farming industry and AusKelp has done the hard work to establish an industry venture and is a global leader in cultivation of Golden Kelp." — Marcus Jowsey (Pambula, NSW)

"Kelp aquaculture is globally recognised as one of the most sustainable forms of ocean farming, requiring no freshwater, fertiliser, feed, or arable land. By cultivating the native species Ecklonia radiata in high energy offshore waters, the project not only produces valuable seaweed biomass but also contributes to nutrient cycling, habitat complexity, and carbon sequestration." — Anna Cooke (Pambula, NSW)

"My company exports and processes Sea Urchins in Pambula. This new Seaweed farm has major potential for both domestic and export markets … This is a win win for the region and the environment." — Ryan Morris, South Coast Sea Urchins (Lilyfield, NSW)

"The RCC actively supports the Auskelp proposal to establish a seaweed farm off the coast of Disaster Bay, creating an industry that will produce healthy food and other products (such as an additive to fertiliser), is good for the environment and will create jobs in this regional community." — Andrew Taylor, Regional Circularity Cooperative & Bega Circular Valley (Bega, NSW)

"Our southern kelp forests are in measurable decline. A farm doesn't save a forest, but it builds the people, hatcheries and field experience we'll need when restoration stops being optional." — Sacha McMonagle-Ihasz (Richmond, Vic)

Representative quotes — Objectors who indicate some SUPPORT for kelp farming

"Whilst aquaculture is of course an acceptable activity and could be supported in general, this is simply the wrong location for such a commercial-industrial use." — Nigel Bertram (Fitzroy, Vic)

"I'm not against kelp farming, but putting a large scale operation here does not make sense." — Anonymous (Woombah, NSW)

"While I support sustainable industry in principle, I do not believe sufficient independent evidence has been provided to justify a 200-hectare industrial marine development in one of the most ecologically and visually significant coastal environments in NSW." — Anonymous (Tathra, NSW)

"While I am not opposed to seaweed farming in principle, I do not believe a 200 hectare marine farm in this location should be approved without further independent research and assessment." — Anonymous (Gleniffer, NSW)

"Asking whether people support kelp farming per se is not the same as asking are they supportive of a 200-hectare industrial scale development in a rare pristine wilderness area." — Ian Williamson (Wonboyn, NSW)

RESPONSE

Auskelp values the time and consideration independent supporters and objectors invested in lodging substantive and informed submissions. The depth and substance of submissions — from named local residents, businesses and regional organisations, and anonymous submissions — is a material element of the public record before the Department.

Of valuable consideration is submitters who oppose the Project, but who in some way support kelp aquaculture. These submitters have engaged constructively with the Project, distinguishing the question of *whether kelp farming is acceptable* from the question of *whether this particular development is the right project in the right place*. This distinction is significant and is treated by Auskelp as an important matter.

Auskelp acknowledges that some submitters in this category have not opposed the strategic case for an Australian seaweed aquaculture industry, the environmental sustainability of *Ecklonia radiata* as a cultivated species, the value of biostimulants and food-grade kelp products, or the broader policy frameworks under which the Project sits. The objections from this category focus on specific matters — location, scale, evidence

base, consultation, wilderness character, and process — that have been addressed in the responses across Section 4 of this report. Auskelp appreciates the position of these submitters and notes that, in many respects, the Project's longer-term strategic contribution to kelp aquaculture in Australia is consistent with what these submitters say they support — seaweed farming done well, and with low risk.

Strategic policy alignment — kelp farming as a priority industry under NSW and Commonwealth policy

The Project's alignment with established government policy is comprehensive. The EIS documents alignment with the following strategic frameworks at the NSW, Commonwealth, regional and local level (EIS Sections 1.1, 1.5 and 11). The Project is supported by the following:

NSW Government strategic frameworks:

- the NSW Aquaculture Industry Vision Statement;
- the NSW Aquaculture Industry Development Strategy 2017;
- the NSW Marine Waters Aquaculture Strategy 2018;
- the NSW Marine Waters Sustainable Aquaculture Strategy (MWSAS) — under which Lease AL21/004 is assessed against the MWSAS Constraints Criteria;
- the NSW Marine Estate Management Strategy 2018–2028;
- the NSW Seaweed Prospectus 2024 — "the global market opportunity for New South Wales (NSW) seaweed is estimated to be worth between A$900 million and A$2.3 billion", and which explicitly identifies offshore kelp aquaculture in regions such as Eden as a strategic priority; and
- the NSW Net Zero Plan Stage 1: 2020–2030 — which recognises seaweed aquaculture as a contributor to climate change mitigation, biodiversity enhancement, and Blue Economy jobs in regional NSW.

Commonwealth and national-level frameworks:

- DAFF National Aquaculture Strategy 2017— which seeks to expand Australia's aquaculture industry to $2 billion annually through sustainable, innovative production;;
- National Marine Science Strategy: Building Blue Futures 2026-2036;
- Australia's Draft Sustainable Ocean Plan 2040;
- Modern Manufacturing Strategy Food and Beverage Roadmap 2021; and
- the Modern Manufacturing Strategy – Food and Beverage National Manufacturing Priority Roadmap 2021 — supporting low-emission, value-added processing of Australian biomass; and
- Commonwealth DCCEEW national strategic framework for seaweed industry development.

Regional and local-level frameworks:

- the South East and Tablelands Regional Plan 2036 — which identifies aquaculture as a priority growth industry and designates the Port of Eden and Snug Cove as strategic economic hubs;
- the Far South Coast Regional Economic Development Strategy (REDS) 2023 Update — which recognises aquaculture and food production as key emerging industries driving regional growth and identifies the Port of Eden and Snug Cove as critical assets;
- the Bega Valley Shire Community Strategic Plan 2042 — promoting sustainable economic growth, regional employment, Indigenous engagement, and revitalisation of the Eden Wharf precinct; and
- the Bega Valley Shire *Funding our Future* strategy — which identifies the Eden industrial precinct as a priority location for sustainable industrial growth and job creation.

Industry and research frameworks:

- Agrifutures Australian Seaweed Industry Blueprint 2020;
- Marine Bioproducts Cooperative Research Centre (MBCRC) Strategic Plan 2025-2028; and
- the Australian Sustainable Seaweed Association (ASSA) industry development framework.

The Project is not a speculative venture pursued outside the strategic policy direction of government; it is a Project pursued within and consistent with the explicit strategic policy direction of NSW and Commonwealth governments, regional economic development authorities, and the relevant national research and industry frameworks. Each of the above documents are publicly available and form part of the strategic context against which the Project should be assessed.

Assessment Outcome

The Project is supported by individuals, businesses and regional organisations. Kelp farming is also supported in some form by a number of submitters who, while raising objections to specific elements of the Project, recognise kelp aquaculture as a positive and needed category of marine use.

Taken together, these findings demonstrate that kelp farming represents a sustainable and climate-resilient regional industry opportunity for NSW. This conclusion is supported by: (a) the Project's potential contribution to regional employment, environmental outcomes, economic development and social impact objectives; (b) the qualified support of submitters who, despite objecting to aspects of this specific proposal, support kelp aquaculture in principle; (c) the Project's alignment with Commonwealth, NSW, regional, local and industry/research policy frameworks; and (d) the overall Project Justification provided in EIS Section 11, which concludes that the overall risks of the Project are low, and if deemed to be appropriately located, supported by an adequate research and evidence base, being subject to suitable management measures, is broadly recognised as having positive environmental, social and economic benefits.

5.0 RESPONSE TO AGENCIES

5.1 Bega Valley Shire Council

Agency role

Bega Valley Shire Council is the local government authority for the Bega Valley local government area, in which the Project is located. Council's interests in respect of State Significant Development projects within its area include strategic planning alignment (the Bega Valley Shire Community Strategic Plan 2042, the Funding our Future economic development strategy, and the Far South Coast Regional Economic Development Strategy); local infrastructure, roads and services; land use, zoning and local character; community wellbeing, amenity and post-bushfire recovery; local employment, supply-chain participation and tourism; environment and biodiversity within mapped overlays; emergency management; Aboriginal cultural heritage and engagement; and Council's statutory role as a referred agency under the *Environmental Planning and Assessment Act 1979*. Council also operates within the broader *South East and Tablelands Regional Plan 2036*, which identifies aquaculture as a priority growth industry and the Port of Eden and Snug Cove as strategic economic hubs.

Summary of advice received

Item	Detail
Date of advice	11 May 2026
Signatory	Mark Fowler, Planning Services Coordinator, Bega Valley Shire Council
Description	Reviewed EIS including supporting documents
Summary	No further issues with the proposed development
Status	Meets BVSC requirements

Matters raised by Bega Valley Shire Council

Council has reviewed the Environmental Impact Statement and the supporting documentation for the Project and has confirmed that it sees no further issues with the proposed development. No specific recommendations, conditions, refinements, additional information requests, or technical concerns have been raised in Council's formal advice to the Department.

Auskelp's response

Auskelp acknowledges the position of Bega Valley Shire Council.

Outcome

No further action is required in response to Council's advice. Auskelp will continue to engage with Bega Valley Shire Council through the assessment process and into the operational phase of the Project in respect of any matters of local interest, including local employment, supply-chain integration, and community engagement.

5.2 DPIRD Agriculture

Agency role

The NSW Department of Primary Industries and Regional Development – Agriculture and Biosecurity (**DPIRD Agriculture**) administers and supports the productive, sustainable use of agricultural land and resources in NSW. The Department's interests in respect of State Significant Development projects include the protection of agricultural land, water resources, agricultural infrastructure, biosecurity, and the social and economic role of agriculture in rural communities. The Department's advice is provided in accordance with section 4.15(1) of the *Environmental Planning and Assessment Act 1979* and the ecologically sustainable development principles in sections 1.3(a) and 1.3(i) of that Act.

Summary of advice received

Item	Detail
Date of advice	30 April 2026
Signatory	Wendy Goodburn, Agricultural Land Use Planning Officer, Agriculture & Biosecurity, Southeast and Tablelands Region
Description	Reviewed the Environmental Impact Statement prepared 13 March 2026
Summary	No agricultural impact identified — no further comment required
Status	Meets DPIRD Agriculture requirements

Matters raised by DPIRD Agriculture

DPIRD Agriculture has reviewed the Environmental Impact Statement and confirms that, as the proposed Project is a marine-based seaweed aquaculture operation and not an agricultural operation, the Project does not impact agricultural land, resources, services or facilities. On that basis, DPIRD Agriculture has confirmed that no comments on the Project are required, and that future major projects or modifications of a similar nature that do not impact agricultural land, resources, services or facilities are not required to be referred to the Department.

RESPONSE

Auskelp acknowledges and welcomes the advice of DPIRD Agriculture. The confirmation that the Project does not impact agricultural land, resources, services or facilities is consistent with the Project description and the impact assessment set out in the Environmental Impact Statement. The Project is located in marine waters within Aquaculture Lease AL21/004 in Disaster Bay and uses existing port and industrial infrastructure at Snug Cove and the Edrom precinct (refer Section 4.13 and Section 4.14). The Project does not displace, use, or affect any agricultural land within the Bega Valley Shire or adjoining local government areas.

Auskelp further notes that the Project provides an indirect benefit to the broader Australian agricultural sector through the supply of seaweed-derived biostimulants that reduce reliance on synthetic agricultural fertiliser at catchment scale (refer Section 4.9 and Section 4.18). That broader policy alignment is reflected in the NSW Seaweed Prospectus 2024.

Outcome

No further action is required in response to DPIRD Agriculture's advice.

5.3 Conservation Planning and Assessment

Agency role

Conservation Planning and Assessment (**CPA**) is a unit within the NSW Department of Climate Change, Energy, the Environment and Water (**DCCEEW**) responsible for the assessment of terrestrial biodiversity values and the application of the Biodiversity Assessment Method (**BAM**) under the *Biodiversity Conservation Act 2016* (NSW). CPA's interests in respect of State Significant Development projects include the assessment of biodiversity impacts under the BAM, the consideration of Biodiversity Development Assessment Reports (BDAR) and BDAR waivers, the protection of threatened species, populations and ecological communities, and consistency with the NSW biodiversity offsets framework.

Summary of advice received

Item	Detail
Date of advice	1 May 2026
Signatory	Tyrie Starrs, Senior Manager – Biodiversity Assessment & Certification South, Conservation Planning and Assessment, DCCEEW
Description	Reviewed the Environmental Impact Statement and the BDAR waiver signed by the delegate on 19 November 2025
Summary	EIS consistent with BDAR waiver provisions — no further comment required
Status	Meets CPA requirements

Matters raised by CPA

CPA has reviewed the Environmental Impact Statement and the associated Biodiversity Development Assessment Report (BDAR) waiver, signed by the delegate on 19 November 2025, and has confirmed that the EIS is consistent with the BDAR waiver provisions. CPA has advised that it has no further comment regarding the assessment of terrestrial biodiversity values or the application of the Biodiversity Assessment Method (BAM) to the Project.

RESPONSE

Auskelp acknowledges and welcomes the advice of Conservation Planning and Assessment. The confirmation that the EIS is consistent with the BDAR waiver represents the formal NSW Government endorsement of the Project's terrestrial biodiversity assessment approach and confirms that the Project does not require a BDAR or biodiversity offsets under the NSW Biodiversity Offsets Scheme.

The BDAR waiver was obtained in recognition that the Project is located offshore in marine waters, with no new land-based infrastructure or vehicle access introduced within the Wonboyn locality, Nadgee Nature Reserve, Beowa National Park, or any adjoining terrestrial conservation area (refer Section 4.4, Section 4.5 and Section 4.14). The earlier-proposed commercial vehicle access route through Nadgee Nature Reserve via Greenglades Road has been withdrawn following early engagement with NSW NPWS (refer Section 5.6).

For completeness, Auskelp notes that:

- the **marine biodiversity** matters associated with the Project — including impacts on threatened marine species under the *Fisheries Management Act 1994* (FM Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) — are addressed within the EIS at Sections 7.10 to 7.15 and within Section 4.5, Section 4.6 and Section 4.7 of this report, and within the agency response to DPIRD Fisheries at Section 5.5;
- an **Assessment of Significance** has been prepared post-exhibition for additional FM Act-listed threatened species identified by DPIRD Fisheries — Grey Nurse Shark, White Shark, Southern Bluefin Tuna, Black Rockcod and Australian Grayling (refer Section 4.5); and
- the Project was formally determined not a controlled action under the EPBC Act on 20 June 2025 (EPBC 2025/10149), confirming that the Project is not likely to have a significant impact on Matters of National Environmental Significance.

Outcome

No further action is required in response to CPA's advice. The Project's terrestrial biodiversity assessment is confirmed as consistent with the BDAR waiver, and marine biodiversity matters continue to be administered through DPIRD Fisheries and DCCEEW.

5.4 Crown Lands

Agency role

The Department of Planning, Housing and Infrastructure – Crown Lands and Public Spaces (Crown Lands) administers Crown land, Crown roads and Crown waterways in NSW under the *Crown Land Management Act 2016*. Crown Lands' interests in respect of State Significant Development projects include the authorisation of use, access or construction of infrastructure on Crown land and Crown waterways, the management of Crown reserves under Crown Land Managers, and the administration of Native Title interests over Crown land in coordination with NSW Native Title Representative Bodies and consent authorities under relevant primary legislation.

Summary of advice received

Item	Detail
Date of advice	5 May 2026
Signatory	Heike Peterlin, Group Leader – South East (Nowra / Bega), Land and Asset Management, Crown Lands and Public Spaces
Description	Reviewed the proposal and identified Crown land, roads and waterways within the project footprint
Summary	Project includes Crown waterway and Crown land – coordination and statutory approvals required with relevant Crown Land Managers and authorities
Status	Conditions agreed - meets Crown Lands requirements

Matters raised by Crown Lands

Crown Lands has reviewed the proposal and confirmed that Crown land, roads and waterways are included within the project footprint.

The advice identifies the following matters for the Proponent's attention:

1. Crown waterway in Disaster Bay and East Boyd Bay – the bed of the waterway within the project footprint is reserved Crown land. Authority to use, access or construct infrastructure on Crown land is required under the *Crown Land Management Act 2016* unless conferred under another Act, such as the *Fisheries Management Act 1994*.
2. Snug Cove (Lots 2 DP 1268599 and 2 DP 747363) within Reserve 180072 – managed by Transport for NSW (TfNSW) as Crown Land Manager. The Proponent is encouraged to consult with TfNSW regarding any proposed use or occupation of the reserve.
3. East Boyd Bay wharf – Lease 400290 over Crown waterway adjoining Lot 161 DP 1066187 – the holder of this lease requires Minister's Consent to enter into any sub-lease for use or occupation of the leased premises.
4. Native Title – Native Title is presumed to exist over Crown land and waterways. As the proposed aquaculture lease is under the jurisdiction of NSW DPIRD Fisheries via the *Fisheries Management Act 1994*, Crown Lands will not be involved with Native Title assessment or identification of a Native Title pathway. DPIRD Fisheries, as the authorising authority, must assess potential native title implications and notification requirements during the lease assessment stage.

RESPONSE

Auskelp acknowledges and welcomes the advice of Crown Lands and confirms its commitment to working within the statutory framework administered by Crown Lands, TfNSW and DPIRD Fisheries. The Project has been designed and described in the EIS on the basis of using existing port and industrial infrastructure, not new infrastructure on Crown land or new occupation of Crown reserves (refer Section 4.13 and Section 4.14). Auskelp responds to each matter raised as follows:

<u>Crown waterway authorisation (Item 1)</u>

Auskelp confirms that the proposed aquaculture lease over the Crown waterway in Disaster Bay will be administered by DPIRD Fisheries under the *Fisheries Management Act 1994*.

Snug Cove (Item 2)

Auskelp confirms that it will engage with Transport for NSW as the Crown Land Manager of Lots 2 DP 1268599 and 2 DP 747363 within Reserve 180072 at Snug Cove. Auskelp will operate any wharfage, slipway, or land-based support functions at Snug Cove under appropriate commercial arrangements with TfNSW, the Port Authority of NSW, or other relevant Crown Land Managers as applicable (refer Section 4.14 and Section 5.9). No alteration, addition or new infrastructure within the Snug Cove reserve is proposed under this SSD application.

East Boyd Bay sublease — Minister's Consent (Item 3)

Auskelp confirms that it understands the statutory requirement for Minister's Consent under the *Crown Land Management Act 2016* prior to entering into any sub-lease arrangement under Lease 400290 at East Boyd Bay. Auskelp will obtain Minister's Consent in coordination with Crown Lands and the existing lessee prior to any sub-lease arrangement being executed, if and when this occurs.

Native Title (Item 4)

Auskelp acknowledges the Crown Lands advice that Native Title is presumed to exist over Crown land and waterways, and confirms its understanding that the Native Title pathway for the proposed aquaculture lease is administered by DPIRD Fisheries as the authorising authority under the *Fisheries Management Act 1994*.

Outcome

Auskelp will:

- continue to operate within the *Fisheries Management Act 1994* lease framework administered by DPIRD Fisheries in respect of the Crown waterway within the proposed lease boundary;
- engage with TfNSW as Crown Land Manager regarding any use of the Snug Cove reserve facilities;
- obtain Minister's Consent under the *Crown Land Management Act 2016* prior to entering any sub-lease arrangement under Lease 400290 at East Boyd Bay; and
- satisfy all Native Title compliance requirements through DPIRD Fisheries prior to lease grant.

The maps provided by Crown Lands identifying the Crown land and Crown waterways within the project footprint (Crown Lands advice dated 5 May 2026) are noted and have been incorporated into the Project documentation.

5.5 DPIRD Fisheries

Agency role

The NSW Department of Primary Industries and Regional Development – Fisheries (**DPIRD Fisheries**) is the lead State agency responsible for the administration of marine aquaculture and commercial fishing in NSW under the *Fisheries Management Act 1994* (**FM Act**). DPIRD Fisheries' interests in respect of the Project include the administration of the aquaculture lease (Lease AL21/004) and aquaculture permit, the section 37 permit for broodstock collection, the hatchery permit, the assessment of impacts on FM Act-listed threatened species, marine biosecurity, the protection of commercial and recreational fisheries, native title implications, and compliance with the NSW Marine Waters Sustainable Aquaculture Strategy (**MWSAS**) constraints criteria. DPIRD Fisheries is the regulatory authority with continuing oversight of the Project throughout its operational life.

Summary of advice received

Item	Detail
Date of advice	7 May 2026
Signatory	Ian Lyall, Director Aquaculture & Industry Development, DPIRD Fisheries
Description	Reviewed the EIS and supporting documents at public exhibition stage
Summary	Supportive in principle, with eight specific conditions for the Proponent to address
Meeting	3 June 2026 – clarification of advice and outputs (Ian Lyall, Dr Emma Wilke)
Status	Conditions agreed - meets DPIRD Fisheries requirements

Matters raised by DPIRD Fisheries

DPIRD Fisheries has identified eight specific matters in the EIS and attachments that require the Proponent's response. Each matter and the Proponent's response is set out below.

Item 1 – Correct referencing of DPIRD throughout future documentation

DPIRD must be referenced correctly throughout future documentation for consistency, except where referencing a document published by the previous DPI.

RESPONSE

Auskelp acknowledges and accepts this advice. All documentation prepared by Auskelp will reference "DPIRD" (Department of Primary Industries and Regional Development) consistently, except where direct reference to a previously-published document of the former NSW Department of Primary Industries (NSW DPI) is appropriate.

The following documents have been updated as a result of Agency advice during this submissions response process and are attached as follows: Environmental Management Plan (Appendix RC4), Biosecurity Plan (Appendix RC3), Marine Fauna Interaction Plan (Appendix RC1), Emergency Response Plan (RC2), Cultural Heritage Response Plan (Appendix RC5).

Item 2 – Coastal Protection Act 1979 has been repealed

The advice notes that the *Coastal Protection Act 1979* has been repealed.

Response: Auskelp acknowledges this correction. The Coastal Protection Act 1979 has been repealed, and the relevant statutory references are corrected in this report to reflect the Coastal Management Act 2016 (NSW) and State Environmental Planning Policy (Resilience and Hazards) 2021 as the current operative legislation. These corrected references are reflected in Section 4.2 (Procedural Matters) and Section 4.12 (Coastal Erosion) of this report.

Item 3 – Seasonal benthic and water quality sampling

DPIRD Fisheries supports the Proponent's commitment that the benthic survey is a snapshot and would benefit from seasonal sampling for natural variation, including seasonal water quality sampling.

Item 4 – Assessment of Significance for additional FM Act threatened species

DPIRD Fisheries recommends that an Assessment of Significance under section 220ZZ of the FM Act be prepared for the below species:

- Grey Nurse Shark (*Carcharias taurus*, CE)
- White Shark (*Carcharodon carcharias*, V)
- Southern Bluefin Tuna (*Thunnus maccoyii*, E)
- Black Rockcod (*Epinephelus daemelii*, V)
- Australian Grayling (*Prototroctes maraena*, E)

Response:

The Southern Bluefin Tuna has been added to the Threatened and Protected Species List. Assessments of Significance have been provided for the above species in accordance with the NSW DPI *Threatened Species Assessment Guidelines – Assessment of Significance*.

The document is attached as Appendix RB1 Assessment of Significance. Each assessment concluded that the Project is unlikely to have a significant effect on the species or its habitat, and that a Species Impact Statement is not required.

Item 5 – Marine Fauna Interaction Plan (MFIP) edits

The MFIP needs to be edited to ensure that:

- observers are on the vessel during the deployment stage;
- night-time procedures are more explicit; and
- a Marine Fauna Management Committee is established, which must include cetacean experts.

The Proponent is directed to pages 35–38 of the MWSAS for further information.

Response: Auskelp accepts and adopts this advice. The revised MFIP is attached as Appendix RC1.

Item 6 – Broodstock sentence completion (EIS Section 9.4.2)

EIS Section 9.4.2 contains an incomplete sentence: *"a minimum of 12 separate wild parent individuals are used, and wild replenishment is …"* The proponent must complete this sentence and provide details as to whether the annual replenishment of wild stocks to the hatchery is ongoing indefinitely or if the hatchery operations become self-sustaining. The activity will require a section 37 permit under the FM Act.

Auskelp's response: Auskelp confirms that the sentence is completed as follows:

"…a minimum of 12 separate wild parent individuals are used in each annual broodstock collection, and wild replenishment will be undertaken on an annual basis (every 12 months) to maintain genetic diversity within the cultivated population."

Note: Annual wild collection will be retained throughout the operational life of the Project to support continuing genetic exchange with the wild population. Auskelp confirms that wild broodstock collection will only be undertaken with receipt of a valid Section 37 permit issued by DPIRD Fisheries.

Item 7 – Biosecurity Plan as a standalone document

The Biosecurity Plan (BP) needs to be a standalone document, expanded to include: the farm and hatchery location; the NSW DPIRD Biosecurity Emergency Animal Disease Hotline; reporting details; specific kelp diseases of biosecurity concern; hatchery water source and extraction, and proximity to international shipping; notifiable and prohibited matter under the *Biosecurity Act 2015* (NSW); requires evaluation of

existing genetic tools such as Reef Adapt; defined operational modules; and detailed management responses replacing vague language. The BP must align with the DPIRD Primefact "What to Include in your Aquaculture Biosecurity Plan."

Auskelp's response: Auskelp accepts and adopts this advice. The Biosecurity Plan has been restructured as a standalone document, substantially expanded to address each matter raised by DPIRD Fisheries:

- farm and hatchery location details added;
- NSW DPIRD Biosecurity Emergency Animal Disease Hotline and reporting arrangements added;
- specific kelp diseases of biosecurity concern (Wiltshire, K.H., Bansemer, M.S., Deveney, M.R. et al., 2025; Ward et al. 2026) added;
- hatchery water source, extraction, and biosecurity risk pathways, including proximity to international shipping in Twofold Bay added;
- notifiable and prohibited matter under the *Biosecurity Act 2015* (NSW), with explicit response protocols for marine pest detection in biofouling added;
- evaluate Reef Adapt for the mapping of local genetic seedstock in Southern NSW;
- defined operational modules mapped within the BP;
- detailed management responses replacing previously high-level commitments;
- alignment with the DPIRD Primefact *What to Include in your Aquaculture Biosecurity Plan*.

The revised Biosecurity Plan is provided at Appendix RC3.

Item 8 — Environmental Management Plan (EMP) — incorporation of monitoring and reporting commitments

The EMP should identify the monitoring and reporting of the following items identified in the EIS:

- Mitigation Measures CE3, RE1, RE2 — third-party environmental audits every three years (fish assemblages and benthic habitat), with public findings and, if required, corrective actions;
- Mitigation Measures BI1 and RE3 — annual reporting of significant beach-cast deposits of *Ecklonia radiata* and annual reporting of beach-cast deposits of *Ecklonia radiata* on Greenglades Beach related to farming operations.

Auskelp's response: Auskelp accepts and adopts this advice.

The Environmental Management Plan has been updated and is attached at Appendix RC4 of this report.

Outcome

As detailed above, Auskelp has met all the requirements advised. Auskelp values the comprehensive and constructive advice provided by DPIRD Fisheries and confirms its commitment to working with the agency through aquaculture permit grant, lease execution, and the operational phase of the Project.

5.6 NSW National Parks and Wildlife Service

Agency role

The NSW National Parks and Wildlife Service (**NPWS**), within the NSW Department of Climate Change, Energy, the Environment and Water (**DCCEEW**), administers national parks and reserves under the *National Parks and Wildlife Act 1974* (**NPW Act**) and has statutory responsibility for the protection, conservation and management of native wildlife under the NPW Act and the *Biodiversity Conservation Act 2016* (**BC Act**). NPWS' statutory responsibility for wildlife extends to all marine animals, reptiles and birds in NSW waters out to 3 nautical miles (5.6 km) offshore, including the lead role in responding to marine wildlife events. NPWS' interests in respect of the Project include the protection of Nadgee Nature Reserve, the management of marine wildlife interactions, and the protection of threatened shorebird habitat on the beaches of the Reserve.

Summary of advice received

Item	Detail
Date of advice	7 May 2026
Signatory	Chris Darlington, A/Director, South Coast Branch, NSW National Parks and Wildlife Service
Description	Reviewed the EIS, the Marine Fauna Interaction Plan and supporting documentation
Summary	Supportive of the Project's amendment to avoid commercial access through Nadgee Nature Reserve, with two specific recommendations and one operational protocol
Status	Conditions agreed - meets NPWS requirements

Matters raised by NPWS

NPWS' advice acknowledges the Proponent's withdrawal of the earlier-proposed commercial vehicle access route through Nadgee Nature Reserve via Greenglades Road, and reiterates that no vehicles are permitted off publicly accessible designated roadways within the Reserve, with access from designated roads to Wonboyn Beaches strictly by foot on designated pathways. NPWS notes that threatened shorebirds nest on these beaches and unauthorised access poses a significant concern.

NPWS identifies the following matters:

1. Project-related debris on Nadgee Nature Reserve beaches — by the nature of the Project, it is inevitable that debris may wash ashore within Nadgee Nature Reserve. NPWS recommends that NPWS is notified immediately in the event of any project-related debris washing ashore, and that the Proponent is responsible for prompt clean-up.
2. Marine Fauna Interaction Plan (MFIP)
    1. Large whale entanglement protocol — NPWS recommends that the MFIP (Appendix B1) include an update to provide that, if a large whale (greater than 6 m) is entangled in aquaculture gear, the animal will be monitored from a safe distance and NPWS will be notified immediately.
    2. Updated Code of Practice: NPWS recommends the *Code of Practice for Injured, Sick and Orphaned Marine Mammals* (DPE, 2022) and the *Code of Practice for Injured and Sick Sea Turtles and Sea Snakes* (DPIE, 2021) be adopted as primary references for response procedures to handling injured wildlife. See Section 7.0 Reference for document links.
3. Emergency Response Plan (ERP) — recognition of NPWS as relevant authority — NPWS recommends that the ERP include NPWS as a relevant authority for whale collision or interaction with gear, reflecting NPWS' statutory responsibility in responding to wildlife events.

RESPONSE

Auskelp acknowledges and welcomes NPWS' advice, and accepts all recommendations in full.

The following documents have been updated as a result of Agency advice during this submissions response process and are attached as follows: Environmental Management Plan (Appendix RC4), Biosecurity Plan (Appendix RC3), Marine Fauna Interaction Plan (Appendix RC1), Emergency Response Plan (RC2), Cultural Heritage Response Plan (Appendix RC5).

Outcome

Auskelp values the advice provided by NPWS and confirms its commitment to working with the agency on all matters relating to Nadgee Nature Reserve, any marine wildlife events, and the broader conservation values of the NSW Far South Coast.

5.7 Heritage NSW (Aboriginal Cultural Heritage)

Agency role

Heritage NSW, within the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW), administers the regulation of Aboriginal cultural heritage in NSW under Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCR). Heritage NSW (Aboriginal Cultural Heritage) is responsible for the assessment of Aboriginal Cultural Heritage Assessment Reports (ACHAR) for State Significant Development projects, the determination of Aboriginal Heritage Impact Permit (AHIP) applications where required, and the protection of Aboriginal objects and Aboriginal places under the NPW Act. The agency operates as Delegate under the *National Parks and Wildlife Act 1974*.

Summary of advice received

Item	Detail
Date of advice	8 May 2026
Ref Number	HMS ID 14292
Signatory	Corey O'Driscoll, A/Practice Lead – Major Projects, Heritage NSW, DCCEEW (as Delegate under the *National Parks and Wildlife Act 1974*)
Description	Reviewed the EIS, the Aboriginal Cultural Heritage Assessment Report (Biosis, 30 July 2024), and the Cultural Heritage Response Plan (Auskelp, 2 December 2025)
Summary	Additional information required — provision of ACHAR Appendices A to E (Aboriginal community consultation documentation) for review
Meeting	29 May 2026 - clarification meeting (Sarah McGuiness, Brad Duncan)
Status	Documentation sent to Heritage NSW

Matters raised by Heritage NSW

Heritage NSW (Aboriginal Cultural Heritage) has reviewed the Aboriginal Cultural Heritage Assessment Report (ACHAR) prepared by Biosis (dated 30 July 2024) and the Cultural Heritage Response Plan prepared by Auskelp (dated 2 December 2025), and require additional information to inform its advice on whether the ACHAR adequately addresses the Secretary's Environmental Assessment Requirements (SEARs) for the Project:

1. Provision of ACHAR Appendices A to E — Heritage NSW requests a copy of all Aboriginal community consultation documentation (Appendices A to E of the ACHAR) for review.

RESPONSE

Auskelp emailed the requested Appendices A to E of the Biosis ACHAR dated 30 July 2024 to Heritage NSW on 20 May 2026, which comprises the supporting consultation documentation that underpins the formal RAP consultation process undertaken. It is noted that Auskelp uploaded the complete Biosis ACHAR document package to DPHI to the NSW Government Major Projects Portal (including Appendices A to E).

Outcome

Auskelp believes it has met all the requirements related to Aboriginal Cultural Heritage and awaits further notification from Heritage NSW.

5.8 Heritage NSW (European / Maritime Heritage)

Agency role

Heritage NSW, within the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW), administers the regulation of non-Aboriginal and maritime heritage in NSW under the *Heritage Act 1977* (NSW) and, in respect of underwater cultural heritage, the *Underwater Cultural Heritage Act 2018* (Cth). Heritage NSW (European / Maritime Heritage) is responsible for the assessment of historic and maritime heritage matters for State Significant Development projects, including items listed on the State Heritage Register (SHR), historic shipwrecks, and the protection of unknown maritime archaeological material that may be present within or adjacent to project footprints. The agency operates as Delegate of the Heritage Council of NSW.

Summary of advice received

Item	Detail
Date of advice	8 May 2026
Ref Number	HMS ID 14293
Signatory	Corey O'Driscoll, A/Practice Lead – Major Projects, Heritage NSW, DCCEEW (as Delegate of the Heritage Council of NSW)
Description	Reviewed the EIS, the Aboriginal Cultural Heritage Assessment Report (Biosis, 30 July 2024), and the Cultural Heritage Response Plan (Auskelp, 2 December 2025)
Summary	Additional information required — preparation of a Maritime Archaeological Assessment (MAA) and clarification of the unnamed wreck shown in Biosis ACHAR Figure 3
Meeting	29 May 2026 - clarification meeting (Sarah McGuiness, Brad Duncan)
Status	MAA completed, no archaeological items found, risk assessed as low, documentation sent to Heritage NSW for review

Matters raised by Heritage NSW

Heritage NSW (European / Maritime Heritage) confirms that the proposed SSD project area contains no State Heritage Register (SHR) items, nor are any in the vicinity of the project area. The agency notes that no standalone assessment of non-Aboriginal and maritime heritage was undertaken, but that a desktop assessment was included in Section 7.18.2 and Section 9.3.3.2 of the EIS, including a search of the Australian National Shipwreck Database (ANSD), and that a Cultural Heritage Response Plan was also submitted. Heritage NSW identifies the following matters as required additional information to inform its advice on whether the environmental impact assessment complies with the SEARs in regard to maritime archaeology:

1. **Maritime Archaeology Assessment (MAA)** — Heritage NSW notes that the ANSD records known wrecks only and does not account for potentially unknown wrecks that may be present. Heritage NSW requires a Maritime Archaeology Assessment (MAA) to be prepared by a suitably qualified and experienced maritime archaeologist.
2. **Clarification of unnamed wreck in ACHAR Figure 3** — Heritage NSW requests clarification and discussion regarding the unnamed wreck shown in Figure 3 of the ACHAR, located in the vicinity of the project area and noted as potentially to be impacted by the proposed works.

RESPONSE

Auskelp acknowledges and accepts both matters raised by Heritage NSW and confirms the following actions:

1. Maritime Archaeology Assessment (MAA)

In direct response to the advice of Heritage NSW (European/Maritime Heritage), Auskelp commissioned an independent Maritime Archaeology Assessment (MAA) from Cosmos Archaeology (Eden-1 Kelp Aquaculture Farm — Maritime Archaeology Assessment, June 2026, Job No. J26/15), attached as Appendix RC5. The MAA

reviewed the Australasian Underwater Cultural Heritage Database and the NSW Maritime Heritage Database, undertook archival and historical research, and analysed the side-scan sonar (SSS) survey data collected across the study area. The MAA concluded that there is low archaeological potential for shipwreck remains within the study area — most likely limited to disarticulated wreckage washed in and situated on or under the seabed — with a low predicted density, and very low potential for vessel-derived discard. Taking the predicted likelihood and consequence together, the MAA assessed impacts to shipwreck remains as unlikely, with a low risk of adverse impact if left unmitigated.

2. Clarification of unnamed wreck in ACHAR Figure 3 (Item 2)

Auskelp has investigated the provenance of the unnamed wreck shown at Figure 3 of the ACHAR. The wreck symbol was added to the ACHAR figure by Biosis during preparation of the ACHAR (30 July 2024) – this was not a Figure controlled by the Proponent. On follow-up, no supporting records, source citations, or underlying survey data have been identified that explain why the wreck symbol was placed at that location. On the available evidence, the wreck symbol appears to have been added in error during the preparation of the figure.

3. Cultural Heritage Response Plan

The MAA made two recommendations, both accepted by Auskelp: (1) update the Cultural Heritage Response Plan by replacing the 'General Finds Procedure' with the 'Unexpected Finds Procedure' flowchart provided at Appendix A of the MAA, and removing the statement on page 8 of the plan suggesting that finds transported into the area by natural coastal processes are "likely to be less significant"; and (2) provide a maritime archaeology heritage induction to all works personnel and contractors, delivered by a suitably qualified and experienced maritime archaeologist, prior to works commencing.

Outcome

All matters raised by Heritage NSW have been addressed. The MAA (attached as Appendix RC5) has found the risks to both Aboriginal and European heritage to be low and an appropriate Cultural Heritage Response plan is in place.

5.9 Port Authority of NSW

Agency role

The Port Authority of NSW (Port Authority) is the State-owned corporation responsible for the navigation, security and operational safety needs of commercial shipping in NSW ports, including safe navigation of shipping movements, pilotage, port security, emergency response (including marine oil and chemical spill response) and dangerous goods management. In the Eden / Twofold Bay area, Port Authority's interests in respect of State Significant Development projects include ensuring that marine works, vessel movements and the use of port assets are compatible with navigation safety requirements and any other operational constraints, including Defence and Royal Australian Navy operations. Port Authority is also the owner and operator of port infrastructure at Edrom and Snug Cove, including the Edrom Multi-user (MU) Wharf, William Allen Drive, the Eden Cruise Wharf at Snug Cove, and Eden Ice Supplies.

Summary of advice received

Item	Detail
Date of advice	8 May 2026
Signatory	Fiona McKay, Principal Environmental Planner, Port Authority of NSW
Description	Reviewed the EIS for the proposed Auskelp "Eden-1" Kelp Aquaculture Farm Project
Summary	Generally supportive of the Project, with detailed advice across navigation safety, vessel coordination, Defence priority, port asset use, traffic, and biosecurity
Meeting	27 May 2026 - clarification meeting (Fiona McKay, Dan O'Connel, Peter Ernst, Ben Van Asch, Andrew Carswell)
Confirmation	Review of all matters direct with Port Authority and confirmation in writing by Port Authority of acceptance of updated Biosecurity Plan (BP), Environmental Management Plan (EMP) and Emergency Response Plan (ERP).
Status	Conditions agreed – meets Port Authority of NSW requirements

Matters raised by Port Authority

Port Authority's advice indicate the Project is generally supported on the basis that it relies on existing port and industrial infrastructure and is intended to avoid adverse impacts to navigation safety and port operations. The agency identifies the following matters for the Proponent's response:

1. **Navigation safety and maritime operations** – Port Authority supports the EIS approach to navigation buffers, marker buoys and AIS, and requests that detailed design and implementation be jointly agreed with Ports Authority:
    a. surface marker specifications (including lighting, visibility and placement);
    b. maintenance and inspection arrangements; and
    c. communication protocols for installation, servicing and any unplanned maintenance activities.
2. **Defence priority access** – Port Authority supports the EIS commitment that operational scheduling will be coordinated to ensure compatibility with Defence and naval operations (including priority access for Defence-related movements where required), and requests ongoing coordination regarding proposed vessel movements and work programs. Further advice from Port Authority will be requested to ensure Defence and naval operations are aware of the Project and its current progress through the SSD process.
3. **Port Authority facilities and commercial arrangements** – Use of Port Authority facilities (including the Edrom MU Wharf, Breakwater Wharf, and access along William Allen Drive) would require a commercial agreement, with priority to Defence and applicable berthing fees.
4. **William Allen Drive access** – Port Authority requests clarification on Auskelp's proposed use of William Allen Drive, as the owner of the road.

5. **Vessel traffic baseline correction** – Port Authority estimates approximately 20 large vessel movements per day (including Naval operations, 6–8 woodchippers per year and 5–6 log ships per year).
6. **Eden Cruise Wharf access during cruise visits** – Traffic movements around the Eden Cruise Terminal are limited during cruise visits, including to surrounding buildings such as the ice works and bait supply buildings. Access is still available, but it is preferable to avoid peak traffic periods due to the high number of pedestrians.
7. **Environmental safeguards, biosecurity and incident response** – Port Authority supports the EIS commitments regarding the non-intensive operational profile and zero-waste onshore processing, and requests that management plans clearly address marine incident response (including spill prevention and response), reporting arrangements and responsibilities, and measures to manage biofouling and any waste generated during installation, maintenance and harvesting.
8. **Consultation and ongoing coordination** – Port Authority supports ongoing engagement and requests that Auskelp continue to consult with Port Authority on detailed design, installation scheduling, navigation marking, and any proposed changes to the farm layout or operational profile.
9. **Approvals and operational requirements** – Where any works, access or activities intersect with Port Authority-managed assets or operational directions, appropriate permissions and operational clearances will be required prior to commencement.

RESPONSE

Auskelp acknowledges and welcomes the advice from Port Authority and accepts each of the matters raised. It is also appreciates the additional time taken to meet on 29 May 2026 to further confirm the requirements.

Auskelp confirms the following responses:

Navigation safety and maritime operations (Item 1)

Auskelp confirms that the detailed design and implementation of the Project's navigation marking and maintenance arrangements will be developed in consultation with Port Authority and finalised prior to deployment. Specific Port Authority approval will be sought on surface marker specifications (including lighting, visibility and placement), maintenance and inspection.

Defence priority access (Item 2)

Auskelp confirms that vessel scheduling will accommodate Defence and Royal Australian Navy operational priorities at all times. Project vessels will not undertake operations during declared Navy exclusion or exercise periods. Coordination with Defence operations will be maintained through Port Control as the primary point of communication, and Auskelp will provide work-program notification to Port Authority and Port Control with sufficient lead time to enable Defence priority coordination.

Port Authority facilities and commercial arrangements (Item 3)

Auskelp confirms that any use of Port Authority-owned or managed facilities – including the Edrom Multi-user Wharf, Breakwater Wharf, access along William Allen Drive, and the Eden Cruise Wharf – will be undertaken under appropriate commercial agreements with Port Authority. Auskelp will provide Port Authority with planned wharf usage details, including expected frequency, duration, and operational profile, in advance of commencement. Auskelp acknowledges that bookings are subject to availability and that Defence priority applies, and berthing fees are payable.

Auskelp confirms that initial operations are not expected to use William Allen Drive or the Edrom Multi-user Wharf until January 2028, at the earliest, depending on Project approval and Project success. Broader use of Port Authority-managed facilities – including William Allen Drive and the Edrom MU Wharf – would only be required following successful scale-up of operations beyond the initial year. Auskelp respectfully requests Port Authority's understanding that the commercial requirements indicated in the EIS reflect a best-case

scaled scenario that will be realised, only over a multi-year period contingent on the commercial viability of the business model. Auskelp commits to working collaboratively with Port Authority to anticipate future facility requirements as soon as they are known, and to enter into appropriate commercial arrangements with Port Authority prior to any use of Port Authority-managed facilities.

William Allen Drive access (Item 4)

Auskelp confirms that any use of William Allen Drive for vehicle access associated with the Project will be undertaken under appropriate arrangements with Port Authority as the owner of the road. The Project's land transport profile is limited to staff travel between accommodation and the Edrom precinct, and periodic delivery of equipment and harvested biomass between the Edrom precinct and processing facilities. No new road construction, road widening, or vehicle access via Greenglades Road is proposed.

Vessel traffic baseline (Item 5)

Further confirmation from Port Authority that 20 vessel movements per day in Twofold Bay relates to vessels above 50 gross tonnes and 30 m in length – comprising approximately 6–8 woodchippers per year and 5–6 log ships per year, with the balance comprising other large commercial and Defence activity – is acknowledged. Auskelp confirms the figure of 80 to 120 vessel movements per day stated in EIS Section 9.2 relates to estimates of all vessel movements in Twofold Bay (commercial and private), regardless of vessel size.

Eden Cruise Wharf access during cruise visits (Item 6)

Auskelp acknowledges that traffic movements around the Eden Cruise Terminal are limited during cruise visits and that pedestrian volumes are high during those periods. Auskelp confirms that the Project's operational vessel and equipment movements will, wherever practicable, be scheduled to avoid peak traffic periods at the Eden Cruise Wharf during cruise visits, in coordination with Port Authority's cruise terminal scheduling.

Environmental safeguards, biosecurity and incident response (Item 7)

Auskelp confirms that the Project's management plans address marine incident response, biofouling management and waste management as follows:

- the Emergency Response Plan addresses marine incident response, including spill prevention and response, notification arrangements (Port Authority of NSW, AMSA, Marine Rescue NSW, NPWS), and incident reporting responsibilities;
- the Biosecurity Plan addresses biofouling management, marine pest detection, and pathogen risk management;
- the Environmental Management Plan addresses waste management across construction, operation, and decommissioning phases, with a zero-waste objective for onshore processing.

Each of these updated plans have been provided to Port Authority for review, and after amendments, Port Authority confirmed in writing (10 June 2026) the documents are acceptable.

The following documents have been updated as a result of Agency advice during this submissions response process and are attached as follows: Emergency Response Plan (RC2), Biosecurity Plan (Appendix RC3), Environmental Management Plan (Appendix RC4).

Consultation and ongoing coordination (Item 8)

Auskelp confirms its commitment to ongoing consultation with Port Authority on detailed design, installation scheduling, navigation marking, and any proposed changes to the farm layout or operational profile, throughout development, commissioning and operation.

Approvals and operational requirements (Item 9)

Auskelp confirms that all appropriate Port Authority permissions and operational clearances will be obtained prior to the commencement of any works, access or activities that intersect with Port Authority-managed assets or operational directions.

Outcome

Conditions agreed with Port Authority. Auskelp values Port Authority's continuing role in navigation safety, port operations and Defence coordination in the Eden / Twofold Bay area, and confirms its commitment to operating within the Port Authority's operational framework as requested.

5.10 DPIRD Food Authority & Biosecurity

Agency role

The NSW Food Authority, within the NSW Department of Primary Industries and Regional Development – Agriculture and Biosecurity (DPIRD Food Authority & Biosecurity), is the State regulator responsible for food safety across the NSW food supply chain under the *Food Act 2003* (NSW) and the *Food Regulation 2015*. The Food Authority's interests in respect of State Significant Development projects include the suitability of the production environment for food-grade products, the licensing of food businesses (including aquaculture and seaweed processing operations), and the protection of public health through verification of safe food handling and processing practices.

Summary of advice received

Item	Detail
Date of advice	11 May 2026
Ref Number	OUT26/5424
Signatory	Wendy Goodburn, Agricultural Land Use Planning Officer, Agriculture & Biosecurity, Southeast and Tablelands Region, DPIRD (conveying NSW Food Authority advice)
Description	Reviewed the EIS at the request of DPHI
Summary	Supportive – the site is assessed as a good choice for seaweed culture for human consumption, with food licensing under the *Food Act 2003* to be confirmed at the operational stage
Status	Advice acknowledged

Matters raised by DPIRD Food Authority & Biosecurity

The NSW Food Authority advice provides two substantive points for the Proponent's response:

1. **Site suitability for human consumption** – From a Food Authority perspective, the site is a good choice for seaweed culture for human consumption. The remote nature of the site is likely to produce a product with low levels of potential contaminants.
2. **Licensing under the *Food Act 2003*** – From an accreditation perspective, the seaweed processing operation may require licensing under the *Food Act 2003*, depending on the product and the processing steps undertaken prior to sale. The seaweed farm operator will be able to determine its requirements and, if required, apply for a food licence once the farm is operational.

RESPONSE

Auskelp acknowledges and welcomes the supportive advice of DPIRD Food Authority & Biosecurity. The Food Authority's confirmation that the site is a good choice for seaweed culture for human consumption. Auskelp acknowledges that food licensing under the *Food Act 2003* may apply to the seaweed processing operation, depending on the product and processing steps undertaken prior to sale.

Auskelp values the supportive position of DPIRD Food Authority & Biosecurity and confirms its commitment to operating within the food safety regulatory framework administered by the Food Authority throughout the lifecycle of the Project.

Outcome

No change to the EIS assessment. DPIRD Food Authority & Biosecurity confirms the site is well suited to seaweed cultivation for human consumption, with licensing requirements under the Food Act 2003 to be addressed during the operational phase, if required.

5.11 Transport for NSW

Agency role

Transport for NSW (**TfNSW**) is the lead NSW Government agency responsible for the planning, delivery and operation of the State's transport network, including state roads, freight network performance, road safety, and the regulation of maritime activity on NSW waterways through NSW Maritime. TfNSW's interests in respect of State Significant Development projects include the operational and safety performance of the state road network, traffic generation and heavy vehicle access, marine safety and navigation, the delineation and management of aquaculture leases in line with NSW Maritime requirements, the integration of project-generated vessel movements with existing waterway users, and compliance with applicable marine safety legislation. TfNSW is a referred agency in the SSD assessment process for matters within its area of responsibility.

Summary of advice received

Item	Detail
Date of advice	20 May 2026
Reference	STH24/00340
Signatory	Nathan Boscaro, Team Leader, Development Services, Transport for NSW
Description	Reviewed EIS and supporting documents for SSD-41680467
Summary	No objection to the proposal
Status	Meets TfNSW requirements

Matters raised by Transport for NSW

TfNSW has reviewed the Environmental Impact Statement and supporting documentation and confirmed that it has no objection to the proposal. TfNSW noted the contextual matters relevant to its area of responsibility, including that the Princes Highway is located approximately 17 km southwest of the lease area; that harvested kelp will be transported by truck to the Edrom and Eden processing facilities via Edrom Road and the Princes Highway; and that the Project at full capacity is anticipated to generate approximately 17,300 vehicle trips per year. In relation to waterway use, TfNSW confirmed that recreational boating and fishing will continue in surrounding waters, that the lease area will be clearly delineated and managed in accordance with NSW Maritime requirements and applicable marine safety legislation, and that vessel movements associated with the Project are anticipated to integrate successfully into the existing waterway user profile with no significant effect to recreational use patterns.

RESPONSE

Auskelp acknowledges and welcomes the advice of Transport for NSW..

Outcome

No further action is required in response to TfNSW's advice. Auskelp will continue to engage with TfNSW through the operational phase of the Project in respect of any matters within TfNSW's area of responsibility.

5.12 Department of Climate Change, Energy, Environment and Water (Marine)

Agency role

The Department of Climate Change, Energy, the Environment and Water (DCCEEW) supports the administration of the Biodiversity Conservation Act 2016 and contributes to the joint administration of the Marine Estate Management Act 2014. DCCEEW's interests in respect of the Project include marine biodiversity, ecological risk, marine biosecurity, genetic integrity of wild kelp populations, marine pests and diseases, environmental monitoring, adaptive management, and the assessment of environmental acceptability in the context of uncertainty and knowledge gaps.

Summary of advice received

Item	Detail
Date of advice	28 May 2026
Reference	STH24/00340
Signatory	Susan Crocetti, Principal Policy Officer Marine, Strategic Policy Science & Engagement, DCCEEW
Description	Reviewed the EIS, supporting documentation and agency submissions, including advice from DPIRD Fisheries regarding biosecurity plan adequacy
Summary	Requested additional information regarding ecological consequences, biosecurity pathways, genetic and stock management, climate-related risk, monitoring, adaptive management, residual risk and uncertainty
Meeting	4 June 2026 - review of advice from DCCEEW meeting: Susan Crocetti & Hamish McDonagh-Aiken [DCCEEW]
Status	Additional draft documentation provided to DCCEEW on 10 June 2026 including Biosecurity Risk Assessment, Knowledge Gaps Uncertainty Register, updated Biosecurity Plan and updated Environmental Management Plan. All requests for information met.

Matters raised by DCCEEW

DCCEEW identified six substantive matters requiring further information. An online meeting was conducted on 4 June 2026 to discuss the advice and to request additional review by DCCEEW of updated information.

Each matter and the Proponent's response is set out below:

Item 1 – Ecological Consequences

The EIS concludes that risks associated with marine pests, pathogens, diseases and nuisance fouling organisms are negligible following implementation of management measures. Additional information is required describing plausible ecological consequences should identified biosecurity pathways occur despite implementation of proposed controls.

RESPONSE

Auskelp accepts and adopts this advice. A detailed pathway-based Biosecurity Risk Assessment (BRA) has been prepared to respond to Agency advice and is provided as Appendix RB2.

The BRA identifies key ecological receptors including:

- native *Ecklonia radiata* kelp forests;
- associated reef ecosystems;
- fish assemblages;
- marine invertebrate communities; and
- broader coastal marine habitats.

The BRA assesses plausible ecological consequences associated with pests, pathogens, disease and nuisance fouling organisms, identifies evidence-based and inferred impacts, explicitly documents uncertainty, and applies a precautionary risk-assessment framework consistent with the approach requested by DCCEEW. The BRA concludes that residual ecological risks remain low following implementation of the identified controls and management measures.

Item 2 — Pathways for Spread to Natural Ecosystems

Additional information is required describing pathways by which pests, pathogens, diseases or nuisance organisms could spread from project infrastructure to surrounding natural ecosystems.

RESPONSE

Auskelp accepts and adopts this advice. An assessment linking hazards, receptors, pathways, controls and residual risk outcomes has been incorporated into the Biosecurity Risk Assessment (BRA) to respond to Agency advice and is provided as Appendix RB2.

The assessment considers pathways associated with:

- vessel biofouling;
- hatchery water intake;
- equipment movement;
- stock transfer;
- natural dispersal;
- water movement;
- disease transmission;
- pathogen amplification;
- nuisance fouling organisms; and
- climate-related stressors.

The assessment identifies pathway-specific controls, evaluates likelihood and consequence, identifies assumptions and uncertainties, and justifies residual risk conclusions following implementation of management measures.

Item 3 — Genetic and Stock Management

Additional information is required regarding local broodstock sourcing, propagation methods, gene-flow risks and potential impacts on wild populations.

RESPONSE

Auskelp accepts and adopts this advice. Based on Agency advice, the revised Biosecurity Risk Assessment (Appendix RB2) and a revised and updated Biosecurity Plan (Appendix RC3) now include a genetic integrity assessment.

Key controls include:

- use of only native *Ecklonia radiata*;
- local broodstock sourced from within the Disaster Bay bioregion;
- >20 individual parent individuals
- Once operational, addition of 12 wild parent individuals in each broodstock collection event (every 12 months);
- annual wild-stock replenishment;
- no genetically modified organisms;

- no interstate or international genetic translocation;
- evaluation of Reef Adapt for local provenance assessment;
- hatchery-controlled propagation; and
- harvest prior to Stage 3 reproductive maturity.

Cultivated biomass is harvested prior to reproductive maturity and prior to significant sori formation, preventing reproductive release and substantially limiting opportunities for gene flow or genetic interaction with surrounding wild populations. The Project does not involve intentional reseeding, stock enhancement or restoration activities within natural kelp forests. The revised Biosecurity Plan and Biosecurity Risk Assessment are provided as Appendix RC3 and Appendix RB2 respectively.

Item 4 — Climate and Emerging Risk

Additional information is required regarding the influence of future environmental change, including marine heatwaves and climate-related stressors, on biosecurity risk.

RESPONSE

Auskelp accepts and adopts this advice. Based on Agency advice, the Biosecurity Risk Assessment (Appendix RB2) and a new Knowledge Gaps and Uncertainty Register (attached as Appendix RB3) have been provided to address likely effects of:

- marine heatwaves;
- ocean warming;
- East Australian Current strengthening;
- environmental stress;
- disease susceptibility;
- pathogen and pest amplification potential; and
- adaptive management responses.

The assessment recognises uncertainty regarding future climate conditions and applies a precautionary approach through ongoing monitoring, adaptive management, review of risk ratings and regulatory oversight.

Item 5 — Monitoring and Adaptive Management

Additional information is required demonstrating how the monitoring framework supports detection of biosecurity risks, trigger thresholds, management responses and adaptive management.

RESPONSE

Auskelp accepts and adopts this advice. The Biosecurity Plan (Appendix RC3) and Biosecurity Risk Assessment (Appendix RB2) address the following:

- defined monitoring indicators;
- pathway-specific monitoring requirements;
- disease and mortality monitoring;
- introduced marine pest surveillance;
- hatchery contamination monitoring;
- biofouling monitoring;
- climate-stress monitoring;
- trigger thresholds; management responses;

- incident reporting procedures;
- corrective action requirements; and
- adaptive management processes.

The monitoring framework explicitly identifies detection limitations and establishes management responses should trigger thresholds be exceeded.

Item 6 — Residual Risk and Uncertainty

Additional information is required regarding assumptions, uncertainties, data gaps and the justification of residual risk conclusions.

RESPONSE

Auskelp accepts and adopts this advice. A dedicated Knowledge Gaps and Uncertainty Register (Appendix RB3) has been prepared which does the following:

- identifies key assumptions;
- identifies known uncertainties and data gaps;
- documents pathway-specific uncertainty levels;
- explains how uncertainty has been addressed;
- applies conservative assumptions where appropriate;
- identifies monitoring and adaptive management responses; and
- explains why residual risks remain acceptable despite uncertainty.

The revised Biosecurity Risk Assessment adopts a precautionary pathway-based framework and no longer relies solely on qualitative assertions of negligible risk. Instead, ecological consequences, pathways, uncertainty, monitoring and adaptive management are explicitly assessed and documented.

Outcome

Auskelp has addressed all matters raised by DCCEEW through preparation of a standalone Biosecurity Risk Assessment (Appendix RB2), Knowledge Gaps and Uncertainty Register (Appendix RB3), and updates to the Biosecurity Plan (Appendix RC3) and Environmental Management Plan (Appendix RC4) and this information was forwarded to DCCEEW on 10 June 2026.

Auskelp values the constructive advice provided by DCCEEW and has adopted the requested precautionary, pathway-based and uncertainty-informed assessment approach. The additional assessment demonstrates that ecological, biosecurity, disease, pest and genetic risks have been systematically evaluated and monitored through multiple independent controls, adaptive management mechanisms and ongoing regulatory oversight. Whilst there remains unknown aspects of offshore kelp farming of *Ecklonia radiata* in Australian waters, the updated documentation, understanding of the potential risks and subsequent controls illustrate that the residual environmental risks associated with the Project, based on kelp farming globally, remain low.

5.13 Department Planning, Housing and Infrastructure (DPHI)

Agency role

DPHI is the lead assessment agency for the Eden-1 Kelp Aquaculture Farm under the State Significant Development (**SSD**) process. DPHI's role is to coordinate the assessment of the Project, consult with government agencies, evaluate environmental, social and economic impacts, consider submissions received during public exhibition, and prepare an Assessment Report and recommendation for the consent authority.

As the Project received more than 50 unique public objections during exhibition, the consent authority is the Independent Planning Commission (**IPC**). DPHI remains responsible for managing and coordinating the assessment process, reviewing the Environmental Impact Statement and Submissions Report, obtaining advice from relevant government agencies, and preparing its final assessment and recommendation to the IPC.

Summary of advice received

Item	Detail
Date of advice	5 June 2026
Reference	SSD-41680467 — Eden-1 Kelp Aquaculture Farm, Disaster Bay
Signatory	Joanna Bakopanos, A/Director Industry Assessments, as delegate for the Planning Secretary
Description	Request for Information in Submissions Report, informed by the Department's review of the EIS, the issues raised in objecting submissions
Summary	21 matters set out in Attachment 1, with particular emphasis on justification for the proposed scale of development and detail of the staging framework; responses to DCCEEW and TfNSW advice also required
Meeting	30 June 2026: Online meeting to review DPHI advice: Joanna Bakopanos, Sally Munk, Catriona Shirley [DPHI]
Status	Additional information provided as per the 21 information requests

Matters raised by DPHI

By correspondence dated 5 June 2026, DPHI requested additional information be provided within the SRR in response to matters identified through the Department's review of the Environmental Impact Statement, issues raised in public submissions, and advice received from government agencies. Accordingly, a number of the matters raised by DPHI have already been addressed elsewhere in this report, including through additional technical assessments, revised management plans, updated project descriptions and responses to agency submissions.

DPHI's letter of advice focused on 21 matters relating to: visual amenity and local character; justification of the proposed scale of development; staging and adaptive management; scientific evidence supporting the proposal; marine fauna interactions; beach-cast kelp management; land-based infrastructure and associated approvals; use of port infrastructure; Aboriginal cultural heritage consultation; maritime heritage; social impact assessment; statutory planning context; employment generation; interactions with commercial and recreational fishing; industry value chain definition; infrastructure design details; threatened species assessments; biologically important areas; vessel movements and vessel strike risk; risk assessment methodology; and the consolidation of management, mitigation and monitoring measures. Particular emphasis was placed on justification of the proposed development scale, the staging framework, environmental performance monitoring and the adaptive management approach.

The following sections provide a detailed response to each matter raised by DPHI and identify where information has been amended, clarified or supplemented within the SRR and supporting documentation.

5.13.1 Item 1 – Impacts on Local Character and Amenity

Approximately 90% of public submissions raised concerns regarding impacts on the wilderness values of the area, including Nadgee Nature Reserve and Beowa National Park. The Department recommended a viewpoint-specific assessment of visual impacts from key vantage points (Disaster Bay Lookout, Green Cape Lighthouse, Greenglades Picnic Area, and Merrica Beach and Nature Trail), demonstration of visual impacts using test infrastructure within the lease location if possible, including a navigation buoy, and assessment of potential noise impacts at Merrica Beach.

RESPONSE

Auskelp accepts the Department's recommendation and provides a viewpoint-specific assessment of visual impacts from key vantage points (Disaster Bay Lookout, Green Cape Lighthouse, Greenglades Picnic Area, and Merrica Beach and Nature Trail), which is attached below.

The wilderness and coastal-character context, offshore siting of the lease (minimum 1.1 km from Greenglades Beach and approximately 1.1–2.1 km from the Nadgee Nature Reserve Declared Wilderness Area), predominantly sub-surface infrastructure, and limited visible surface elements are addressed at Section 4.4 (Wilderness & Coastal Character) and Section 4.11 (Visual Amenity) of this report, together with EIS Section 9.3.1, Figure 45, Figure 43 and Risk Table 9.

The Department recommended visual demonstration using temporary infrastructure within the proposed lease location where practicable. Auskelp notes that a long-term in-water demonstration already exists: an offshore test array has been deployed within Disaster Bay for more than two years and consists of multiple longlines and four corner markers, providing a directly representative example of the type of infrastructure proposed for the Project. This existing installation allows visual assessment under actual operating conditions, including varying weather, sea-state and lighting conditions.

The test array is located 800 m offshore of Greenglades Beach, closer to shore than the proposed lease area, which is located 1.1 km offshore at the closest point. The test array corner markers are located 200 m apart in a square. This provides an excellent reference from Greenglades beach and other locations on visual amenity.

Context and proportionality

Overall, the visual and acoustic effects of the overall Project should also be considered in the context of existing aquaculture activities that are already established and accepted within the broader Wonboyn and Disaster Bay region. Approximately 47 hectares of oyster aquaculture leases operate within Wonboyn Lake and the Wonboyn estuary immediately adjacent to Nadgee Nature Reserve. These operations include visible surface infrastructure, work vessels, shore-based facilities and regular operational activity close to the shoreline. Wonboyn lake is also used by considerable number of private marine vessels for fishing, water skiing and other visual and sound-intensive purposes.

By comparison, the Eden-1 Project is located entirely offshore, with infrastructure positioned a minimum of 1.1 km from the shoreline and predominantly below the water surface. Operational vessel movements are intermittent, infrastructure is passive in nature, and no shore-based operational facilities form part of the SSD application. In this context, the Project is more remote from public viewing locations, less visually prominent and expected to generate lower levels of visual and acoustic interaction with public viewing locations than established aquaculture operations that have long coexisted with the environmental and recreational values of the area.

<u>Viewpoint Assessment</u>

Photographs have been prepared from the relevant publicly accessible viewpoints, including Disaster Bay Lookout, Green Cape, Greenglades Beach and Merrica Beach at a focal length of 55mm, unless otherwise stated. These images and assessments identify the location of both the existing test array and the proposed AL21/004 lease area, enabling direct comparison of relative distances and visibility. If visibility is unlikely, this is also detailed. The Greenglades Picnic Area itself does not have a direct line of sight to the lease area due to local topography and vegetation – even so a photograph is provided. The existing Auskelp Section 37

Offshore Test Farm provides a directly representative demonstration of visual effects of the proposed Project from land, with identical offshore longlines positioned a similar distance from shore.

Test Farm longlines, floats and corner markers are 800 m from shore (at the closest point). Every effort has been made to ensure the distances and perspectives in the assessments below are accurate and proportional to the viewable areas available.

Disaster Bay Lookout

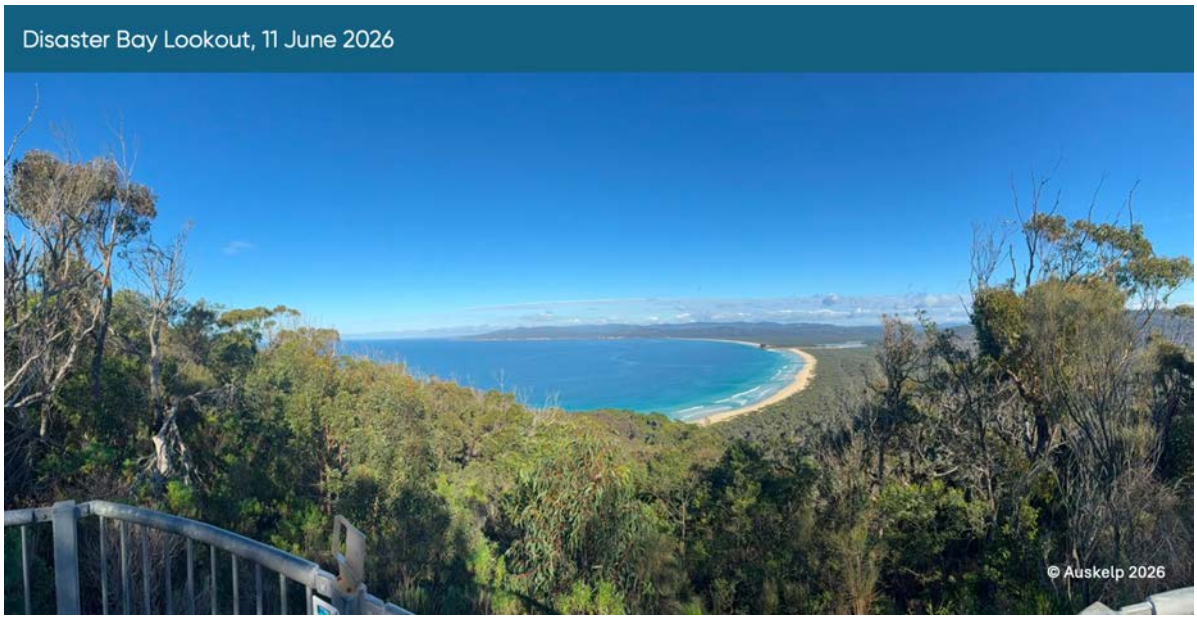

Figure 14: View from Disaster Bay Lookout at 24mm focal length (Credit: Auskelp 2026).

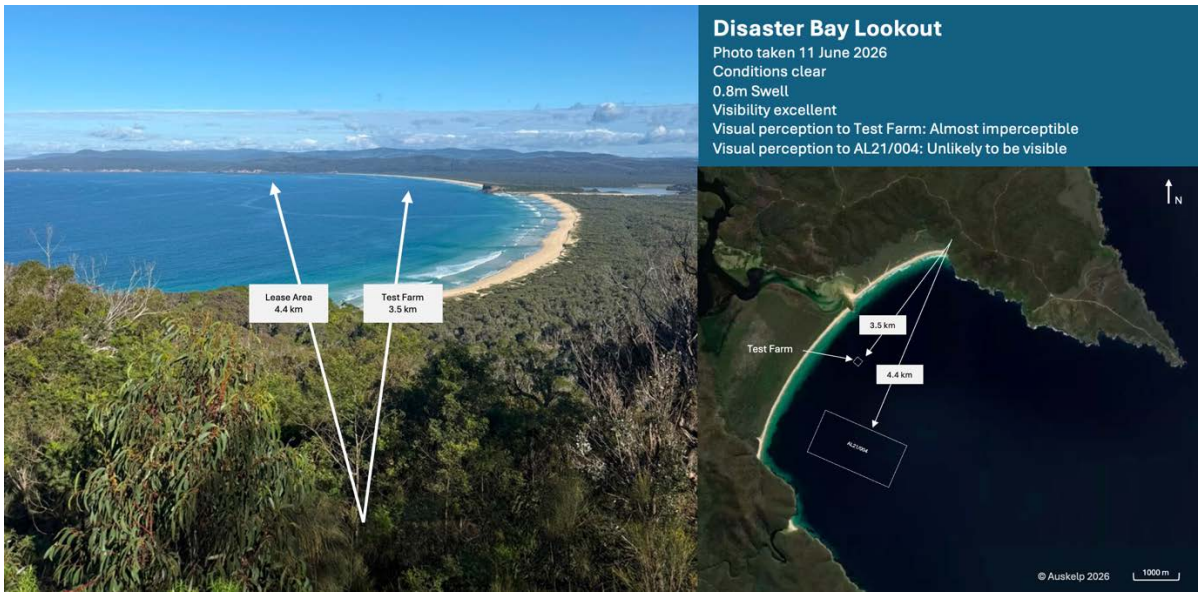

Figure 15: Visual amenity assessment from Disaster Bay Lookout. Photograph (left, 11 June 2026; clear, excellent visibility, 0.8 m swell) paired with an aerial reference (right) showing the test farm (3.5 km) and proposed lease area AL21/004 (4.4 km). Even under near-optimal viewing conditions, the test farm is almost imperceptible and the lease area is unlikely to be visible from shore (Credit: Auskelp 2026).

Green Cape

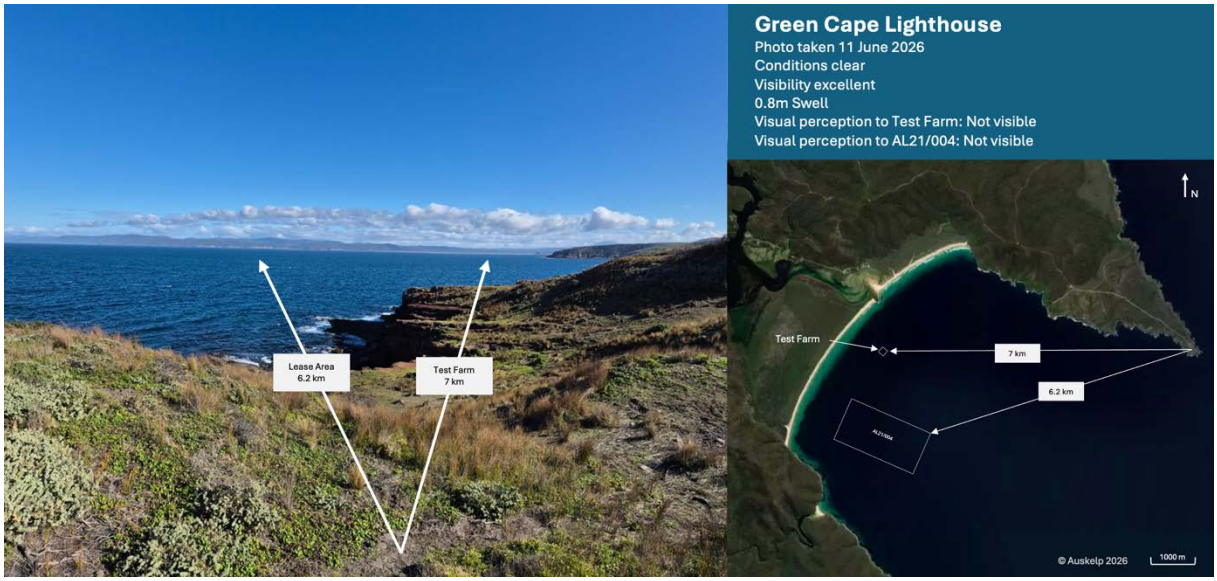

Figure 16: Visual amenity assessment from Green Cape point, 11 June 2026 (clear conditions, excellent visibility, 0.8 m swell). The photograph (left) and aerial reference (right) indicate the proposed lease area AL21/004 (6.2 km) and the existing test farm (7 km). Neither site was discernible from this viewpoint under the observed conditions (Credit: Auskelp 2026).

Merrica Beach

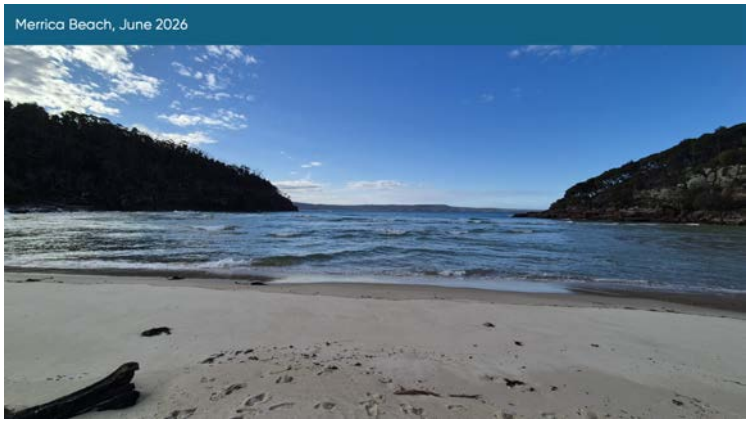

Figure 17 Merrica Beach at 24mm focal length, June 2026 (Credit: Auskelp 2026).

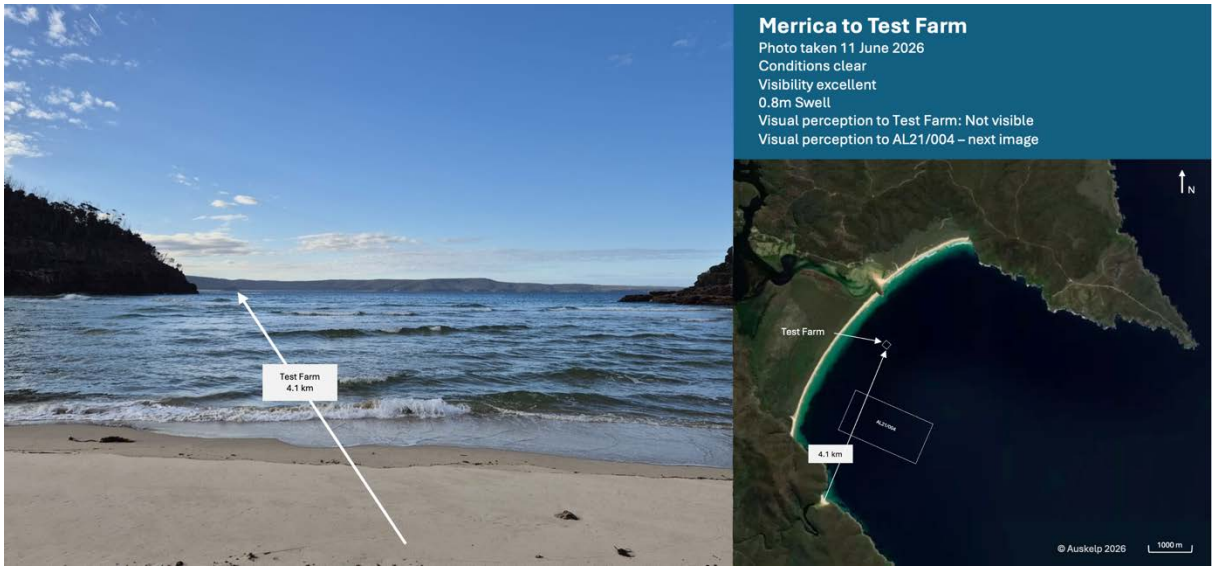

Figure 18: Visual amenity assessment from Merrica toward the existing test farm (4.1 km), 11 June 2026 (clear conditions, excellent visibility, 0.8 m swell). The photograph (left) and aerial reference (right) indicate the test farm location and sightline. The test farm was not discernible from this viewpoint under the observed conditions (Credit: Auskelp 2026).

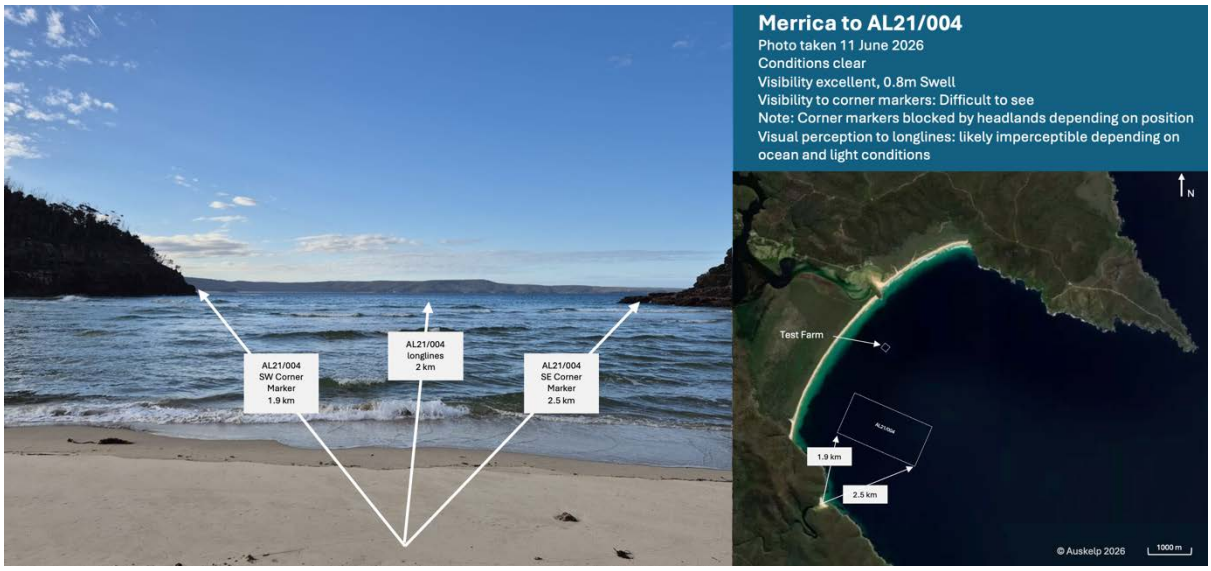

Figure 19: Indicative visual amenity assessment from Merrica toward the proposed lease area AL21/004, 11 June 2026 (clear conditions, excellent visibility, 0.8 m swell); AL21/004 southwest corner marker (1.9 km), southeast corner marker (2.5 km) and longlines (>2 km). Corner markers likely be difficult to see. Longlines likely imperceptible under typical conditions (Credit: Auskelp 2026).

Greenglades South

Figure 20: Greenglades South picnic area – no visibility to Disaster Bay (Credit: Auskelp 2025).

Figure 21: Visual amenity assessment from the south end of Greenglades Beach toward the existing test farm (2.9 km), 11 June 2026 (clear conditions, excellent visibility, 0.8 m swell). The photograph (left) and aerial reference (right) indicate the test farm location and sightline. The test farm was imperceptible from this viewpoint under normal conditions (Credit: Auskelp 2026).

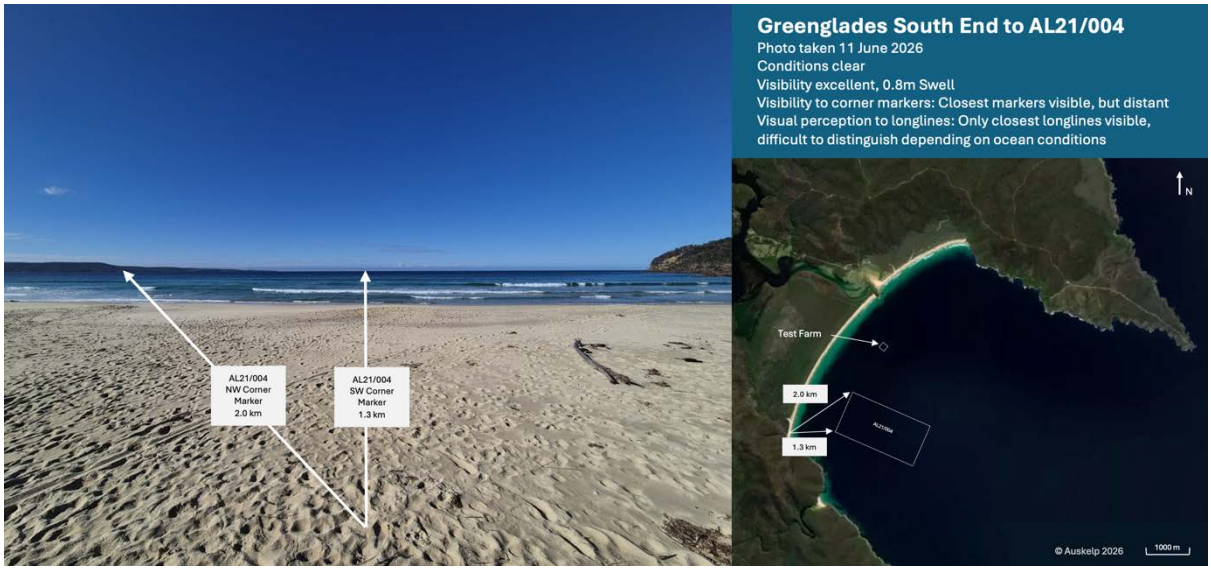

Figure 22: Indicative visual amenity assessment from Greenglades South to the proposed lease area AL21/004, 11 June 2026 (clear conditions, excellent visibility, 0.8 m swell); AL21/004 northwest corner marker (2.0 km), southeast corner marker (1.3 km) and longlines (>1.4 km). Corner markers visible, but distant. Longlines visible closest to beach but difficult to distinguish (Credit: Auskelp 2026).

Greenglades North to Test Farm

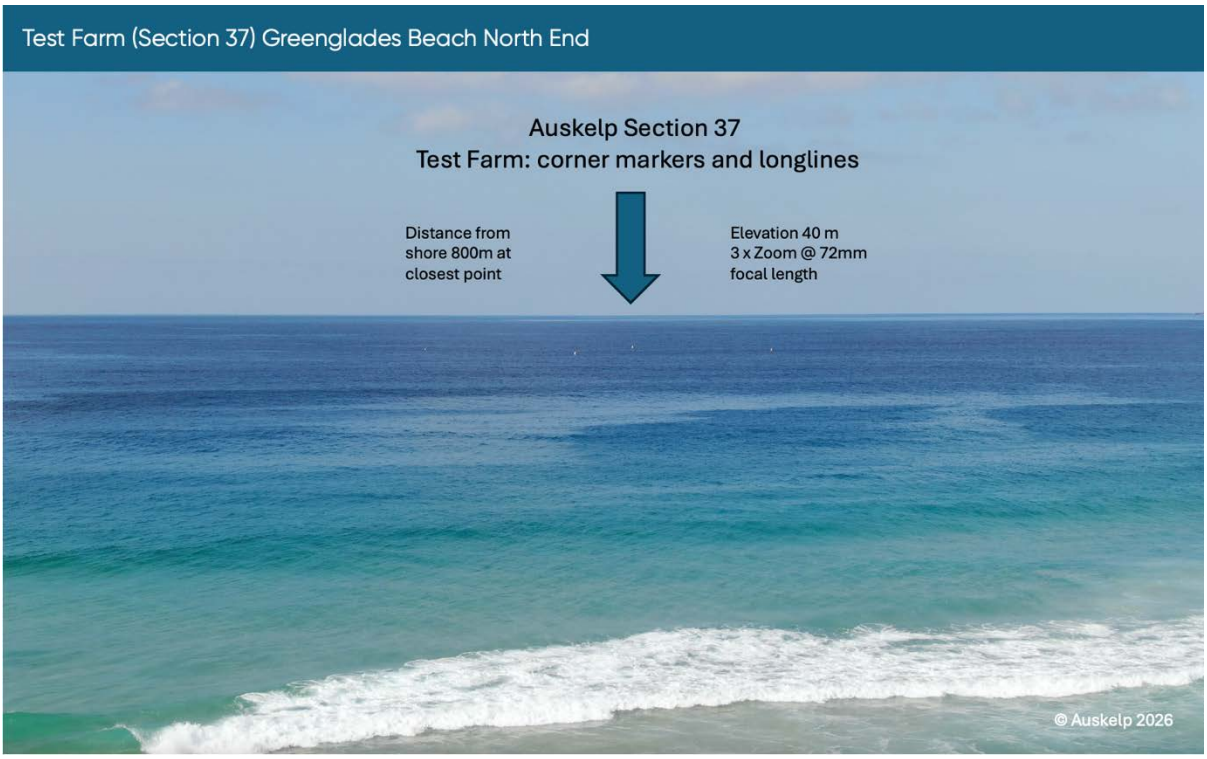

Figure 23: Visual amenity assessment of the Auskelp test farm (Section 37) from the north end of Greenglades Beach, viewed at 800 m from shore (40 m elevation, 3x zoom 72 mm). At this distance and under magnification, the surface markers are discernible against the water. Corner markers are approximately 200 m apart in a square formation (Credit: Auskelp 2026).

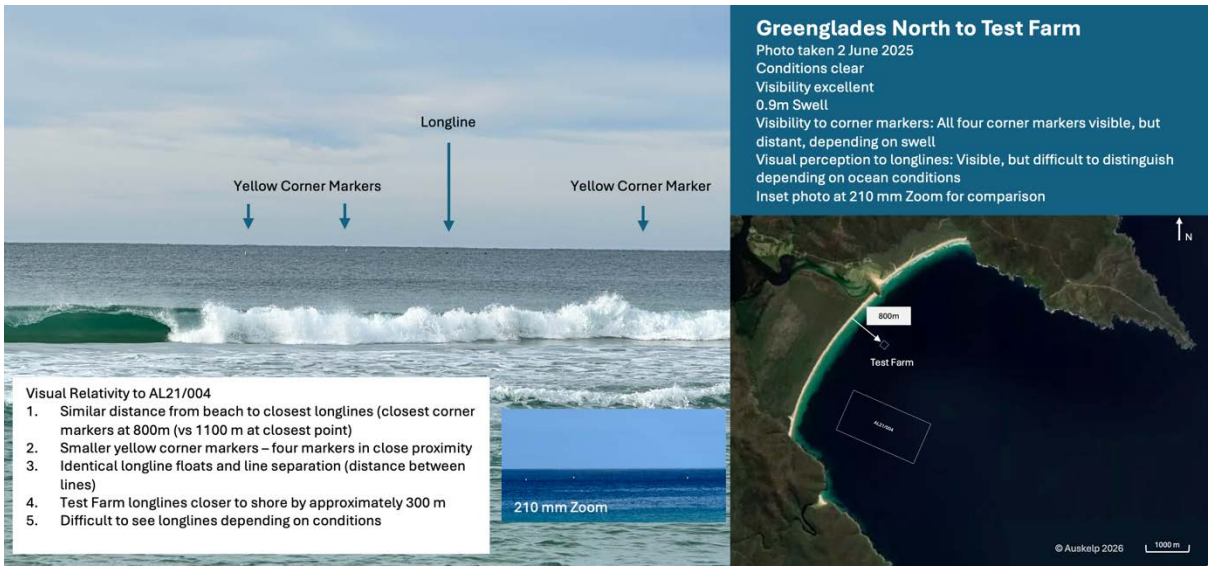

Figure 24: Visual amenity assessment of the Auskelp Test Farm from the north end of Greenglades Beach, 2 June 2025 (clear conditions, excellent visibility, 0.9 m swell), with a 210 mm zoom inset. The image indicates the test farm yellow corner markers and longline, with the aerial reference (right) showing the test farm (800 m at closest point) relative to the proposed lease area AL21/004. Inset photo at 210 mm zoom for reference. All four corner markers were visible but distant depending on swell, and the longlines were visible but difficult to distinguish depending on ocean conditions. As an indicative comparison for AL21/004 closest corner markers at approximately 1.1 km, around 300 m further from shore than the test farm; the AL21/004 lease would present similar but more distant (Credit: Auskelp 2026).

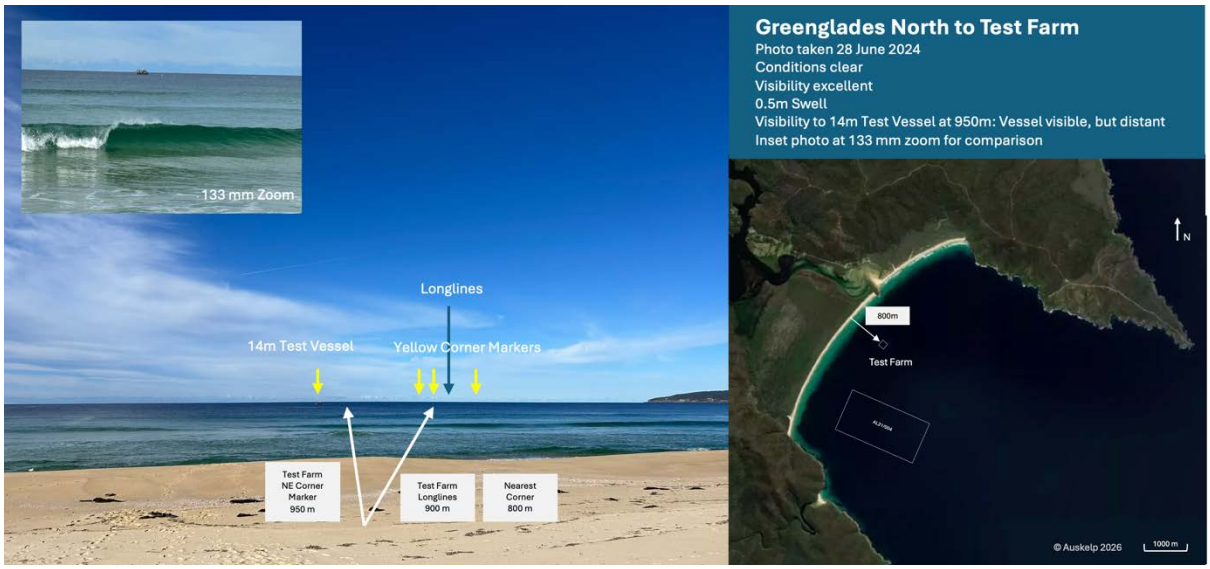

Figure 25: Visual amenity assessment of the Auskelp test farm from the north end of Greenglades Beach, 28 June 2024 (clear conditions, excellent visibility, 0.5 m swell). The photograph (left) and aerial reference (right) indicate the test farm NE corner marker (950 m), longlines (900 m), nearest corner (800 m) and a 14 m test vessel at 950 m. Inset photo at 133 mm zoom for reference. Under these conditions the 14 m vessel was visible but distant, providing a scale reference against which the corner markers and longlines are viewed (Credit: Auskelp 2026).

Wonboyn Oyster Farms

For context, the following images are provided to show oyster farms located directly adjacent to Nadgee Nature Reserve. Oyster farms are an accepted part of the local Wonboyn community, recognised as an important employer in the region, and also an ongoing provider of high quality aquaculture products of which locals are rightfully very proud.

Figure 26: Example of existing oyster aquaculture infrastructure at the Wonboyn Lake entrance, directly adjacent to the Nadgee Nature Reserve, October 2024. The image shows established intertidal oyster cultivation — fixed posts, rails and basket lines — situated within the estuary immediately abutting the declared wilderness area (Credit: Auskelp 2026).

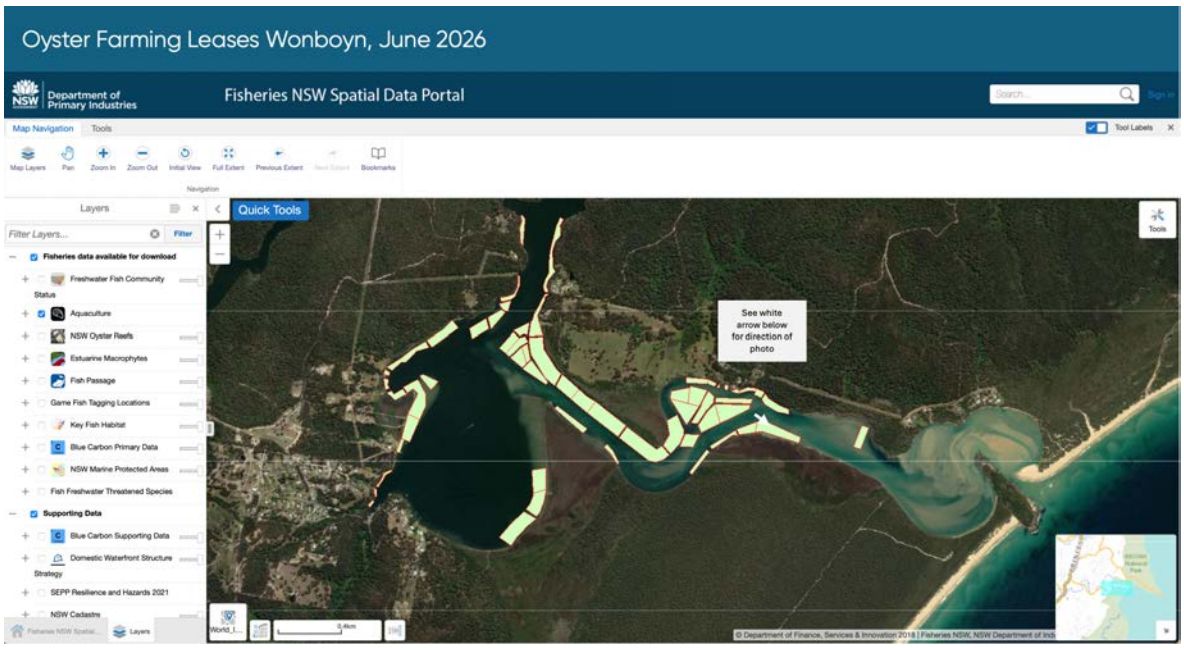

Figure 27 Map of existing oyster aquaculture lease areas at the Wonboyn, directly adjacent to the Nadgee Nature Reserve. Direction of Figure 26 photograph is detailed with white arrow to show direction (Source: Department of Primary Industries, Fisheries NSW Spatial Data Portal June 2026).

Outcome

The Disaster Bay viewpoint assessment is based on direct, real-world observation based on the existing Section 37 offshore test farm — deployed in Disaster Bay in March 2024. The test farm is sited closer to shore than the proposed lease, and comprising the same longline and float infrastructure proposed for AL21/004. It is noted that the proposed corner markers will be moderately larger than the current corner markers, depending on NSW Port Authority requirements. The test farm provides a conservative, representative reference for the likely visibility of the Project under actual weather, sea-state and lighting conditions.

Across the publicly accessible viewpoints assessed, and under the near-optimal viewing conditions on the survey dates (clear skies, excellent visibility, low swell), the findings are consistent:

- From the elevated and more distant viewpoints — Disaster Bay Lookout (test farm 3.5 km; lease 4.4 km) and Green Cape (test farm 7 km; lease 6.2 km) — the test farm was almost imperceptible to not discernible, and the Project infrastructure is also unlikely to be visible or not discernible.
- From the beach-level viewpoints at Merrica (test farm 4.1 km) and the south end of Greenglades Beach (test farm 2.9 km), the test farm was not discernible to imperceptible under normal conditions. On this basis, from Merrica Beach the Project corner markers would be distant, and visual amenity of the longlines likely difficult to see or imperceptible depending on ocean conditions.
- The Greenglades Picnic Area has no direct line of sight to the lease area owing to local topography and vegetation.
- From the north end of Greenglades the visible elements are limited to corner markers and longline floats, which may only be discernible on close inspection and remain difficult to distinguish against the water depending on swell and light.
- From the south end of Greenglades – the closest near-field views — the test farm at 800 m from shore under magnification (9× and 210 mm zoom) — confirm that even at this distance, inside the minimum 1.1 km offshore separation of the proposed lease, the visible elements are limited to surface corner markers and longline floats, which are discernible but distant against the water depending on swell and light.
- The Project will not be visible from any residential locations – this has been confirmed by siting from on-water corner marker locations, back to land at 2m height.

Because the proposed AL21/004 infrastructure is further offshore than the test farm by 300m (and presents the same low-profile, predominantly sub-surface design with corner markers and floats above the waterline), the visibility from shore will be lower again than that demonstrated by the test farm. The assessment therefore provides a practical and conservative representation of the visibility of the Project.

In the EIS project risk profile in EIS Section 9.3.1, Risk Table ,9 states the project is likely to be visible (likelihood 6), and the consequence as possibly detectable but minimal impact on structure, function or dynamics. Thus the overall visual impact is classified as low. Auskelp considers that the proposed siting of the Project ensures the risk rating is appropriately rated.

<u>Noise impacts at Merrica Beach</u>

The Department requested that potential noise impacts at Merrica Beach be assessed, noting the location's significance as an isolated coastal destination within the Nadgee Nature Reserve Declared Wilderness Area.

The Project's only routine operational noise source is service-vessel movement associated with deployment, inspection, maintenance and harvesting activities. Vessel activity is limited to daylight operations, generally 0–3 return trips per day during routine operations, at operating speeds below 15 knots, with sound levels comparable to recreational boating vessels. The Project does not involve, pile-driving, dredging, blasting, fixed and permanent mechanical plant, processing facilities or any other continuous industrial noise source within the marine environment (Section 4.10; EIS Sections 9.2.1, 9.3.4 and 9.4.5).

Four factors combine to substantially reduce any potential noise impact at Merrica Beach.

1. **Separation distance.** Merrica beach is located approximately 1.9 km or more from the nearest point of the lease area and substantially further from the principal areas of routine vessel activity.

At these distances, and taking into account the headlands that surround Merrica beach (visible in Figure 17, 18 and 19) vessel noise is expected to be attenuated and masked by existing ambient coastal sound sources including wind, surf, wave action/refraction and wildlife (as per the findings in EIS 9.3.4 Noise During Operation).

2. **Vessel routing.** All routine vessel movements approach and depart the lease from the Green Cape side of Disaster Bay. Vessel traffic does not transit along the Nadgee coastline and does not pass close to Merrica Beach during operations. Consequently, the nearest vessel movements associated with the Project occur offshore and away from the Nadgee Wilderness Area and Merrica Beach.
3. **Natural topography.** Merrica Beach is bounded by coastal headlands and elevated terrain to both the north and south. These landforms provide natural shielding between the beach and offshore vessel movements, further reducing the potential transmission of airborne noise into the beach environment.
4. **Existing acoustic environment.** The broader receiving environment is not devoid of human activity or human-generated sound. Public vehicle access is provided through Nadgee Nature Reserve via the Merrica Road access corridor to the Merrica River carpark for movements associated with visitors, campers, fishers, National Parks management activities. It is acknowledged that no vehicle access is available directly to Merrica Beach (only walking access via the Merrica River Nature Trail – which is a 4 km, 8 km return hike), and this provides for far less noise pollution. Even so, man-made pollution can occur at the Merrica, as can marine vessel-generated noise which forms part of the existing acoustic environment.

Assessment Outcome

Based on modelling provided in the EIS, predicted noise levels generated at Merrica Beach are projected below the typical ambient coastal background noise levels from 18–25 dB(A) and are therefore expected to be effectively masked by the natural soundscape. Having regard to the intermittent nature of vessel operations, the absence of continuous or impulsive noise sources, the offshore location of the lease, the effects of wind direction, the vessel-routing arrangements from the Green Cape side of Disaster Bay, the natural shielding provided by surrounding landforms, and the existing human activity already occurring within the broader coastal landscape, the Project is not expected to generate noise at Merrica Beach that is materially discernible above the existing ambient soundscape. Accordingly, no significant impact on the acoustic environment, wilderness values or visitor experience at Merrica Beach is anticipated.

5.13.2 Item 2 – Staging Framework and Environmental Performance

The Department has requested additional justification for the proposed scale of the Project, citing that Eden-1 would be Australia's first commercial-scale cultivation proposal for *Ecklonia radiata* and that the industry remains at an early stage of development.

RESPONSE

1. The Project should not be characterised as Australia's or NSW's first approved *Ecklonia radiata* cultivation area. New South Wales already contains 49.5 ha of approved *Ecklonia radiata* aquaculture lease areas (25 km from the Project site in Twofold Bay), as does Tasmania and Western Australia, as detailed below (this information is based on publicly available information):

   Approved *Ecklonia radiata* offshore marine licences

   - Twofold Bay NSW – **49.5 ha** (Eden Sea Farms Pty Ltd)
   - Mercury Passage TAS – **1,598 ha** (Mercury Passage Pty Ltd)
   - Derbal Nara Fremantle WA – **32 ha** (Fremantle Seaweed Pty Ltd)
2. Commercial kelp cultivation of the same kelp family is undertaken globally across areas substantially larger areas than the proposed Eden-1 development. In major producing regions including China, South Korea, Japan, Norway and North America, commercial seaweed cultivation

commonly occurs across hundreds to thousands of hectares. Relative to these operations, the Eden-1 Project represents a modest-scale aquaculture development. While direct comparisons should be made cautiously due to differences in geography, species and regulatory frameworks, the proposed cultivation footprint of 200 hectares with 100 ha maximum infrastructure footprint is small by international industry standards.

3. The proposed scale of the Project reflects the minimum order of magnitude required to evaluate the commercial viability of offshore kelp cultivation in New South Wales and to justify undertaking a multi-year State Significant Development (SSD) process. In addition to regulatory approval, establishing a new aquaculture industry requires significant investment in hatchery capability, seedstock production, specialised vessels, environmental monitoring, workforce training, processing systems, product development and market creation.

The Project is not proposed as a single-stage deployment of 200 hectares with cultivation of areas of 100 hectares. The SSD application seeks approval for a maximum development envelope within which expansion would occur progressively if environmental, operational and commercial outcomes support further deployment. The proposed scale represents the upper limit of development that may occur under the approval rather than infrastructure that will be immediately deployed.

The significance of this distinction should not be understated. State Significant Development approval is currently the only pathway available for establishing new commercial offshore kelp aquaculture within coastal waters in New South Wales (further detailed in Section 6.2 of this SRR). The SSD process establishes the maximum extent of development that may occur within the approved lease area. It does not create an entitlement for future expansion beyond that envelope in the Project area. Any proposal to expand the development footprint beyond the approved size would require separate and additional SSD regulatory assessment and approval processes.

Staging Framework

The Department has requested additional information regarding the proposed staging framework, including the relationship between Phase 1, Phase 2 and Phase 3 development, the arrangement of cultivation infrastructure within the lease area, and the process by which the Project would progressively expand.

Auskelp confirms that the Project is proposed as a staged development and not as a single deployment of the maximum approved infrastructure footprint. The staging framework has been designed to align environmental monitoring, operational experience and commercial performance with progressive expansion of cultivation activities. The Project comprises a 200-hectare lease area, within which a maximum of approximately 100 hectares may be occupied by active cultivation infrastructure at full development. The remaining lease area is retained as open water to provide navigation corridors, operational access, hydrodynamic separation between cultivation areas, environmental buffering and flexibility in infrastructure configuration. Development would occur through the progressive deployment of individual 1-hectare cultivation modules, allowing operational and environmental performance to be assessed before additional infrastructure is installed. The proposed staging framework is summarised below:

Stage	Max Cultivation Area	Description
Phase 1	**25 ha**	Initial commercial deployment and environmental performance assessment
Phase 2	**75 ha**	Progressive expansion subject to environmental, operational and commercial performance outcomes
Phase 3	**100 ha**	Maximum approved cultivation footprint within the lease area

Table 10 Proposed staging framework, Eden-1: three phases.

The exact location of individual cultivation modules within the approved lease requires flexibility to support adaptive management requirements which can be adjusted over time in response to environmental conditions, hydrodynamic performance, navigation requirements, operational experience and maintenance considerations. For this reason, Auskelp does not consider it possible or appropriate to prescribe the final location of individual cultivation modules at the SSD assessment stage.

The purpose of the SSD process is to assess the maximum development envelope and associated environmental effects. The environmental impacts assessed within the EIS relate to the approved lease area and maximum infrastructure footprint rather than the precise location of individual cultivation modules. Any cultivation infrastructure deployed would remain entirely within the approved lease boundaries and within the approved maximum infrastructure footprint. An indicative Stage 1 staging plan indicates the proposed first 25 hectare location within the lease area is provided as Figure 28 (Phase 1 deployment area). These plans are intended to demonstrate the operational capacity of the lease and the indicative expansion plan.

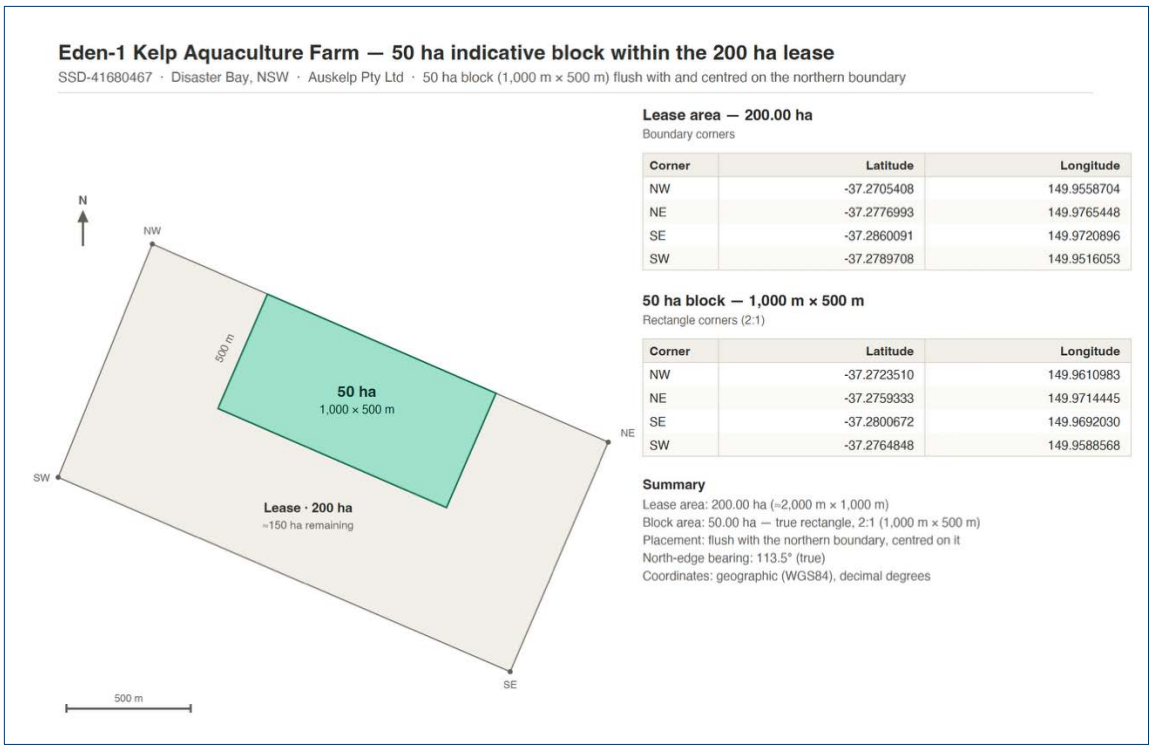

Figure 28: Indicative 50 ha Phase 1 area containing up to 25 ha of cultivation infrastructure, and coordinates (Auskelp 2026).

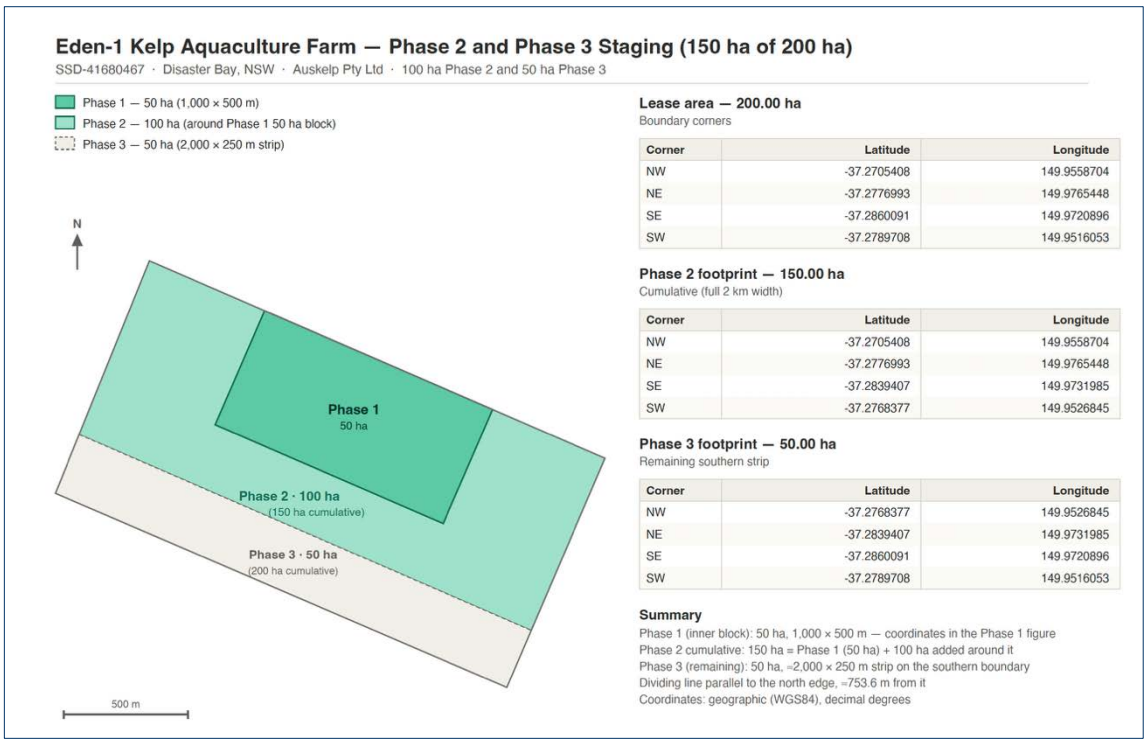

Figure 29: Indicative Phase 2 and Phase 3 staging areas, and coordinates (Auskelp 2026).

Figure 28 and Figure 29 demonstrate the scale relationship between Phase 1, 2 and 3 areas. The figures are intended for assessment purposes only. Phase 1, 2 & 3 coordinates in GDA2020/MGS2020 can be found in Appendix RB8 Eden-1 Phase GIS Data GDA2020/MGA2020 Coordinate Table.

Full Lease Layout

The Department has requested a full development site layout plan illustrating how the maximum 100 hectares of cultivation infrastructure would be arranged within the 200-hectare lease area.

Auskelp does not propose to provide a fixed final lease layout showing the exact location of all future cultivation modules within the lease area. Such a layout would be speculative and would not accurately reflect the manner in which offshore aquaculture developments are progressively implemented and managed over time. The Project has been deliberately designed around a modular deployment framework consisting of individual 1-hectare cultivation units. The precise placement of these units will depend on a range of factors that can only be fully evaluated through operational experience, including hydrodynamic performance, prevailing environmental conditions, navigation requirements, infrastructure performance, maintenance considerations, environmental monitoring outcomes and adaptive-management responses. It is possible that certain areas of the Project area may perform better than others, depending on hydrodynamic and nutrient factors.

Importantly, the purpose of the SSD process is to assess the environmental impacts of the proposed development envelope rather than to approve a fixed engineering arrangement of cultivation modules within that envelope. The environmental assessments contained within the EIS, including biodiversity, marine ecology, navigation, visual amenity, noise, biosecurity and marine fauna assessments, have been undertaken on the basis of the approved lease area and the maximum proposed cultivation footprint.

Adaptive Management Framework

The Department has requested additional information regarding the adaptive-management framework proposed for the Project, including the environmental performance indicators and decision-making processes that would inform progression between development stages.

Auskelp agrees that adaptive management is an essential component of the Project. Offshore cultivation of *Ecklonia radiata* is an emerging industry in Australia and, as recognised throughout the EIS, some uncertainty remains regarding long-term operational performance, commercial outcomes and certain environmental interactions. For this reason, the Project has been designed around a staged, evidence-based and adaptive-management approach rather than a fixed deployment pathway.

Adaptive management is the process by which monitoring results, operational experience and new information are used to inform future management decisions. Under the proposed framework, environmental performance, infrastructure performance, operational outcomes, marine interactions and commercial viability will be continuously evaluated throughout the life of the Project. The results of this monitoring will inform decisions regarding deployment methods, infrastructure configuration, maintenance practices, environmental controls and the progression of future cultivation stages.

Importantly, progression between development stages is not automatic. Expansion beyond Phase 1 and subsequent stages would only occur where environmental, operational and commercial performance demonstrates that further deployment is appropriate. If monitoring identifies unacceptable environmental impacts, infrastructure performance issues, biosecurity concerns, navigation risks or operational inefficiencies, deployment strategies may be modified, delayed, reduced in scale or not progressed further.

The adaptive-management framework incorporates multiple sources of information, including:

- environmental monitoring undertaken in accordance with the Environmental Management Plan;
- marine fauna interaction monitoring;
- biosecurity monitoring and reporting;
- infrastructure integrity and performance assessments;
- navigational safety monitoring;

- operational performance data;
- harvest, processing and product-quality outcomes;
- commercial and market performance; and
- regulatory compliance reporting.

Environmental performance indicators that may inform adaptive-management decisions include, but are not limited to:

- marine fauna interactions;
- marine pest or biosecurity detections;
- significant infrastructure failures or loss of equipment;
- unexpected benthic impacts;
- excessive beach-cast biomass associated with Project infrastructure;
- navigation incidents or near misses;
- non-compliance with approval conditions or management plans; and
- material environmental impacts not predicted within the EIS.

Where monitoring identifies an issue requiring management intervention, Auskelp would implement appropriate corrective actions consistent with the Environmental Management Plan, Biosecurity Plan, Marine Fauna Interaction Plan and any relevant regulatory requirements. Depending on the nature of the issue, responses may include modification of infrastructure design, changes to operational practices, increased monitoring, temporary suspension of activities within affected areas or postponement of future expansion stages until the issue has been satisfactorily addressed.

The adaptive-management framework is therefore intended to ensure that lessons learned during early deployment stages directly inform future development decisions. Rather than assuming that the final configuration and operational practices are known at the commencement of the Project, the framework recognises that continuous improvement and evidence-based decision making are fundamental components of responsible offshore aquaculture development.

Accordingly, Auskelp considers that a staged deployment model supported by adaptive management provides the most precautionary and appropriate pathway for establishing a commercial *Ecklonia radiata* aquaculture industry in New South Wales.

Environmental Performance Indicators

The Department has requested additional information regarding the environmental performance indicators and decision triggers that would be used to inform progression between development stages and support the adaptive-management framework.

The Project has been designed around a progressive deployment model commencing with Phase 1 (25 hectares) and expanding only where monitoring and operational outcomes demonstrate that further development is appropriate.

The principal environmental performance indicators proposed for the Project include:

Marine fauna interactions

- Monitoring of marine mammal, seabird, fish and reptile interactions with cultivation infrastructure.
- Investigation of any injury, mortality, entanglement or significant interaction event.
- Review of operational practices and infrastructure design where required.

Biosecurity performance

- Detection of marine pests, prohibited matter or notifiable diseases.

- Monitoring of biofouling communities and hatchery biosecurity controls.
- Implementation of corrective actions in accordance with the Biosecurity Plan.

Infrastructure integrity

- Monitoring of anchors, moorings, longlines, floats and associated infrastructure.
- Investigation of equipment failures, losses or unplanned releases.
- Modification of infrastructure design where required.

Benthic and marine environmental condition

- Monitoring of seabed condition and environmental performance in accordance with the Environmental Management Plan.
- Assessment of any unexpected environmental changes associated with cultivation activities.
- Review of operational practices where monitoring identifies outcomes inconsistent with EIS predictions.

Navigation and maritime safety

- Monitoring of navigational incidents, complaints, near misses and safety-related events.
- Review of navigation controls, marking systems and operational procedures where required.

Beach-cast biomass

- Monitoring of any unusual accumulation of kelp biomass associated with Project operations.
- Investigation of causes and implementation of management responses where necessary.

Regulatory compliance

- Compliance with approval conditions, management plans, permit requirements and reporting obligations.
- Review and corrective action where non-compliances are identified.

Importantly, environmental performance indicators represent only one component of the decision-making framework. Progression between development stages will also depend on operational performance, infrastructure reliability, product quality, workforce capability, processing capacity and commercial viability. Expansion is therefore not driven solely by available lease area but by the demonstrated ability to operate the Project safely, responsibly and sustainably.

The purpose of the staged deployment model is to ensure that information gathered during earlier phases can be incorporated into future decision-making. Where monitoring identifies issues requiring management intervention, Auskelp may modify infrastructure layouts, alter operational practices, increase monitoring, delay expansion, reduce deployment rates or implement additional mitigation measures as appropriate.

Accordingly, the environmental performance indicators should not be viewed as a fixed checklist for automatic progression between stages. Rather, they form part of a broader adaptive-management framework designed to ensure that environmental protection, operational performance and commercial outcomes are considered collectively before any expansion of cultivation activities occurs.

Table 11 Environmental Performance Indicators, Metrics and Decision Triggers (Indicative) 2026

Eden-1 Kelp Aquaculture Farm, Disaster Bay (AL21/004).
Thresholds reconcile with the Biosecurity Plan, Monitoring and Maintenance Plan and Consolidated Mitigation Measures (Table 19) where a quantitative value is stated.

Indicator	Monitored metric	Method & frequency	Trigger threshold	Management response	Bearing on stage progression
Marine fauna interactions	Recorded injury, mortality or entanglement events involving marine mammals, seabirds, reptiles or fish	Continuous operational observation and MFIP reporting; every site visit	Any confirmed entanglement or fauna mortality attributable to Project infrastructure	Investigate under the Marine Fauna Interaction Plan; review infrastructure and operations; report to NPWS, DPIRD Fisheries as per Emergency Response Plan	Any confirmed entanglement halts expansion pending review or modification
Biosecurity — pests and disease	Detection of Prohibited or Notifiable Matter, or unexplained kelp mortality	Weekly visual and annual diver inspection; hatchery water testing	Any Prohibited Matter detection; or kelp mortality >50% against rolling monthly baseline	Isolate and notify per the Biosecurity Plan; EAD Hotline 1800 675 888; quarantine affected stock	Detection pauses expansion until cause is identified and cleared
Infrastructure integrity	Anchor, mooring, longline or float failures, or equipment loss	Post-storm and routine inspections as Monitoring and Maintenance Plan	Any significant structural failure or unrecovered equipment loss	Recover, investigate and redesign infrastructure as required as per Monitoring and Maintenance Plan and Emergency Response Plan	Repeated or unresolved failures defer the next stage until resolved
Benthic and water condition	Seabed condition and fish assemblage against the Elgin (2025) baseline	3-yearly BRUV and benthic survey at >50% operational footprint	Statistically significant adverse change from baseline not attributable to natural variability	Review operations; increase monitoring frequency; implement corrective action	An adverse benthic trend defers expansion
Climate stress	Sea-surface temperature and relationship to stock condition	Monthly logging; seasonal monitoring as per Biosecurity Plan	Observable stock decline	Heighten disease surveillance; adaptive harvest scheduling; report as per Biosecurity Plan	Informs seeding and harvest timing – may require adaptive management
Cultural heritage	Detection of cultural heritage	Ongoing, screw anchor installation, dive inspections	Any observable or detected cultural heritage	Stop work, respond via the discovery process detailed in Cultural Heritage Response plan	Detection pauses expansion until cause is identified and cleared
Beach-cast biomass	Farm-attributable kelp accumulation on local beaches	Post-storm beach inspections as per Environmental Management Plan	Unusual accumulation attributable to Project infrastructure or biomass	Inspect infrastructure; identify cause; remove in consultation with NPWS and DPIRD Fisheries if required as per Emergency Response plan	Recurring farm-derived accumulation defers expansion
Navigation and safety	Navigational incidents, near-misses and complaints	Ongoing logging and reporting	Any navigation incident or repeated near-miss	Review marking, lighting and operational procedures	Unresolved navigation risk defers expansion
Regulatory compliance	Compliance with consent conditions, permits and management plans	Continuous; annual reporting	Any material non-compliance	Implement corrective action; track to close-out	Outstanding non-compliance precludes progression

IMPORTANT: The thresholds above operate as investigation and decision triggers within the broader adaptive-management framework. Where a quantitative threshold is specified, it reconciles with the commitments in the Biosecurity Plan, Monitoring and Maintenance Plan, Emergency Response Plan and Consolidated Mitigation Measures (Table 21). Where a fixed numeric threshold is not yet scientifically supportable for an emerging cultivation system, the trigger is expressed as an investigation trigger, consistent with a precautionary approach; thresholds will be refined through operational monitoring and the Elgin Associates (2025) baseline as the evidence base matures.

Pilot Testing Programs

The Department has requested clarification regarding the statement within the EIS that "scaled-down pilot testing programs will continue to support readiness, workforce training, infrastructure refinement and ongoing environmental monitoring", including the scale, location, approvals and relationship of these activities to the proposed commercial development.

Auskelp confirms that the reference to pilot testing programs does not relate to pilot projects within the proposed Eden-1 commercial lease area and does not form part of the staged development framework described in this SSD application.

The reference instead relates to the continuation of research, development and testing activities undertaken under separate regulatory approvals, including the existing Section 37 Fisheries Management Act research permit areas currently operating within Twofold Bay and Disaster Bay. These activities are distinct from the proposed commercial aquaculture operation and are undertaken for research, development, training and technology-improvement purposes.

The purpose of these programs is to support the ongoing development of cultivation techniques, hatchery procedures, deployment systems, environmental monitoring methods, workforce capability and infrastructure design. As an emerging industry, continued research and development is expected to remain an important component of industry maturation regardless of whether the commercial Project proceeds.

Examples of activities that may continue under separate research approvals include:

- testing of alternative cultivation systems and infrastructure designs and thresholds;
- hatchery and seedstock development trials;
- broodstock management and propagation research;
- workforce training and operational readiness exercises;
- environmental monitoring methodologies;
- biosecurity research and monitoring;
- cultivation optimisation trials; and
- research projects undertaken in collaboration with universities, government agencies, Cooperative Research Centres and other research organisations.

These activities continue to be undertaken under the relevant research permits, licences and approvals applicable at the time and would not authorise commercial cultivation within the proposed Eden-1 lease area beyond that approved under this SSD application.

Importantly, the pilot testing programs should not be interpreted as a precursor to future expansion beyond the approved development footprint. They are research and development activities intended to improve industry knowledge, operational capability and environmental understanding. The outcomes of these programs may inform future management decisions and adaptive-management responses but do not alter the approved scale, footprint or operational limits of the Project. Accordingly, the pilot testing programs referred to in the EIS are separate research activities conducted under independent regulatory approvals and should not be considered part of the commercial staging framework proposed for Eden-1.

Outcome

The Department's request for additional information focused on the justification of the proposed scale of development, the staging framework, adaptive-management approach, environmental performance indicators and the role of pilot testing programs has been provided.

The additional information confirms that the Project is not proposed as a single-stage deployment of 100 hectares of cultivation infrastructure, but rather as a staged development within a maximum approved development envelope. The Project incorporates a progressive deployment framework commencing with Phase 1 (25 hectares) and expanding only where environmental, operational and commercial outcomes

support further development. Expansion between stages is not automatic and may be modified, delayed or not proceed depending on monitoring results, operational experience and commercial viability.

The assessment also confirms that the proposed scale is consistent with the objective of establishing a commercially viable offshore kelp cultivation industry in New South Wales. While Eden-1 may represent Australia's first SSD approval for cultivation of *Ecklonia radiata*, approved *Ecklonia radiata* cultivation lease areas already exist within Australia and commercial kelp aquaculture of a similar type is well established internationally. The proposed development therefore represents a progression from research and pilot-scale cultivation toward commercial production rather than the introduction of a novel aquaculture activity.

Having regard to the staged deployment model, adaptive-management framework, environmental performance indicators, ongoing monitoring commitments and the regulatory controls that apply to both the Project and any future expansion proposals, Auskelp considers that the proposed approach represents a comprehensive, precautionary, evidence-based and proportionate pathway for the establishment of commercial offshore kelp cultivation in New South Wales. The staged deployment model ensures that environmental monitoring, operational experience and commercial performance are evaluated before expansion occurs, providing a level of precaution and regulatory oversight that is proportionate to both the scale of the Project and the emerging nature of kelp farming in NSW waters.

5.13.3 Item 3 – Scientific Evidence

The Department requested that the scientific evidence underpinning the Project, including the design, methodology, results, monitoring data and key findings from Auskelp's laboratory, hatchery and offshore testing program, be consolidated into a standalone report to support assessment of the application.

In response, Auskelp has prepared Appendix RB5 Technical Testing and Development Report v2.2, which provides a consolidated summary of the research, development and testing program undertaken between December 2021 and June 2026. The report brings together information previously distributed throughout the EIS, technical appendices and annual reporting and documents the objectives, methodology, testing locations, infrastructure configurations, monitoring program, results, lessons learned and the manner in which those findings informed the final lease location, infrastructure design, cultivation methodology, environmental management measures and risk assessment presented within the EIS.

The report demonstrates that the Project is supported by more than four years of laboratory, hatchery and offshore testing undertaken in the Eden region, including approved ocean-testing programs in Twofold Bay and Disaster Bay. It provides the project-specific evidence base requested by the Department and should be read in conjunction with the EIS and associated management plans.

Refer to Appendix RB5 Eden-1 Technical Testing and Development Report.

Outcome

The consolidated Technical Testing and Development Report report confirms that the Project is supported by a substantial evidence base comprising hatchery development, propagation research, offshore engineering trials, environmental monitoring and operational testing undertaken under real-world conditions over multiple cultivation seasons. The research conducted demonstrates that lessons learned through testing directly informed site selection, infrastructure refinement, cultivation practices and risk management measures proposed for the commercial development.

Accordingly, Auskelp considers that the additional information addresses the Department's request and provides a project-specific scientific evidence base to support assessment of the Project.

5.13.4 Item 4 – Whale Entanglement

The Department requested that the known whale migration paths and resting zones be mapped at a suitable scale in relation to the lease, to support the "significant spatial buffer" statement in the EIS, and that the approximate width of that buffer be provided.

RESPONSE

Whale and marine-mammal interaction is addressed at Section 4.6 of this report and at EIS Sections 7.10–7.13 and 9.4.4–9.4.7, with mitigation set out in EIS Risk Tables 18–21. This response is confined to the two specific matters raised by the Department — the whale mapping requested, and quantification of the buffer — and should be read together with Section 4.6 of this SRR, which is not repeated here.

On the mapping of "migration paths", Auskelp must be candid about what can and cannot be provided. Humpback and Southern Right Whale migration along the south-eastern Australian coast is a broad, dynamic, bathymetry and swell-influenced offshore movement, not a fixed route capable of being drawn empirically. It is also not static: migratory timing and distribution are shifting in response to ocean warming, including increasing occupancy of cooler southern and Victorian waters, so any local-scale path mapped today would be a moving target. Critically, no Commonwealth or State agency publishes definitive local-scale mapping of whale migration corridors or resting zones within Disaster Bay, and none has identified a migratory path or resting zone in Disaster Bay (through research for the EIS process, or through consultation with NSW NPWS or DCCEEW). The Project therefore cannot map features that the relevant authorities have not themselves defined or spatially delineated; to attempt to do so would require speculation and would risk presenting unsupported information as fact. For this reason the risk assessment was, appropriately, risk-based — drawing on whale-occurrence records, regional migration behaviour, site-specific observation, infrastructure design, vessel movements, operational controls and the Marine Fauna Interaction Plan — applied to the risk framework. No equivalent requirement to map and avoid migration paths is placed on commercial shipping, commercial or recreational fishing, charter vessels or moorings, which are the documented higher-risk activities for cetaceans.

As requested by DPHI – based on available evidence – the estimated migration paths are quantified and mapped by Auskelp at Figure 30. The literature-recognised whale resting and aggregation area on this stretch of the NSW far south coast is Twofold Bay, located approximately 25 km north of the lease and one of the recognised Southern Right Whale aggregation areas in Australia (Section 4.6; McGovern et al. 2025; EIS Section 9.4.7, DCCEEW, 2024 *National Recovery Plan for the Southern Right Whale).* The AL21/004 lease sits set back inside Disaster Bay — an exposed, high-energy embayment that is not a recognised resting, aggregation or calving area. Whale observations and regional migration patterns indicate that migratory movements predominantly occur offshore of Green Cape between May and November, with the lease area located within the shallower waters within Disaster Bay. The minimum separation between the lease and the primary migration corridor is of the order of 5–8 km. The "significant spatial buffer" referred to in the EIS is therefore quantified as approximately 25 km to the nearest recognised resting and aggregation area, and a minimum of approximately 5 km to the likely migratory corridor.

Auskelp's site-specific research and observation, over multiple years, supports this characterisation. The migratory movement predominantly rounds Green Cape — the headland forming the northern edge of Disaster Bay — in the deeper water close to the headland; cow-and-calf pairs have been observed by Auskelp in the deeper water offshore of the lease (approximately 4 km east, toward the migration corridor — refer Figure 30), consistent with whales following the deeper bathymetric edge rather than entering the shallow embayment in which the lease is located. It is also hypothesised that the predominant clockwise rotation of currents inside Disaster Bay, caused by the north to south EAC current deflecting off Green Cape, may discourage whales from entering towards the south of Disaster Bay, however this is anecdotal and will continue to be reviewed. Across multiple years of continuous offshore operation in Disaster Bay, whales have been observed transiting the broader region consistent with normal migration, but the bay itself has not been observed to function as a resting, aggregation or prolonged-occupancy area, and no whale interactions, entanglements, injuries or mortality events of any kind have been recorded. Note: The deceased whale recorded at the southern end of Greenglades Beach in June 2020 demonstrates that whales move through the wider region, but a stranding of this kind does not establish a fixed migration corridor or resting zone within the lease capable of being mapped. For the absence of doubt, this whale carcass had no documented association with offshore aquaculture and this incident occurred almost three years before any aquaculture testing was conducted in Disaster Bay.

See link to article here: https://www.abc.net.au/news/2020-06-21/six-metre-whale-backbone-discovered-intact-nsw-far-south-coast/12377524

NSW Migration Corridor

The broad pattern of whale migration along the New South Wales coast is suitably described in the published literature and is formally recognised by the IUCN Marine Mammal Protected Areas Task Force as the Australian East Coast Migration Corridor, an Important Marine Mammal Area (IMMA) extending across the east Australian shelf waters from the southern Great Barrier Reef (~22°S) to Cape Howe (~37°S) (IUCN-MMPATF, 2021). Humpback whales migrate northwards between approximately May and August and southwards between August and November, with the corridor most narrowly defined and intensively studied in south-east Queensland. Significantly, towards the southern end of the corridor — in the vicinity of the Eden region and Cape Howe, where the lease is located — satellite-tracking studies show that whale tracks disperse into Bass Strait and the Tasman Sea and the impression of a narrow, mappable corridor breaks down (IUCN-MMPATF, 2021). This is consistent with the position set out above: a finely delineated local-scale migration path cannot meaningfully be drawn in the waters off Disaster Bay, because the corridor itself broadens and diffuses roughly at this latitude.

The influence of regional oceanography on where that migratory movement sits relative to the coast is further supported by the peer-reviewed literature. Schilling et al. 2023 examined humpback whale interactions along the New South Wales coast and found that the strength and position of the East Australian Current (EAC) influenced the likelihood of entanglement in set fishing gear — consistent with the current exerting a strong influence on where the migratory path sits relative to the coast. Entanglement risk was greatest in northern New South Wales (approximately 30.3°S) between July and October, when the EAC flows close to the coast and draws migrating whales nearer to inshore waters. By contrast, no oceanographic association with risk was detected in the EAC separation zone further south (approximately 33.8°S), and risk was further reduced in years following strongly negative Southern Oscillation Index (El Niño) conditions. The Eden-1 lease lies on the far south coast (approximately 37.27°S) — to the south of both study areas, in waters where the EAC separates from the coast and broken into a more variable field of eddies and meanders. In this setting the dominant north-to-south flow deflects off Green Cape and is understood to generate the localised clockwise circulation within Disaster Bay described above. These conditions are consistent with the observed pattern of whales tracking the deeper bathymetric edge offshore of Green Cape rather than entering the shallow embayment, and provide a relatively demonstratable basis for the spatial separation between the migratory corridor and the lease.

See next page...

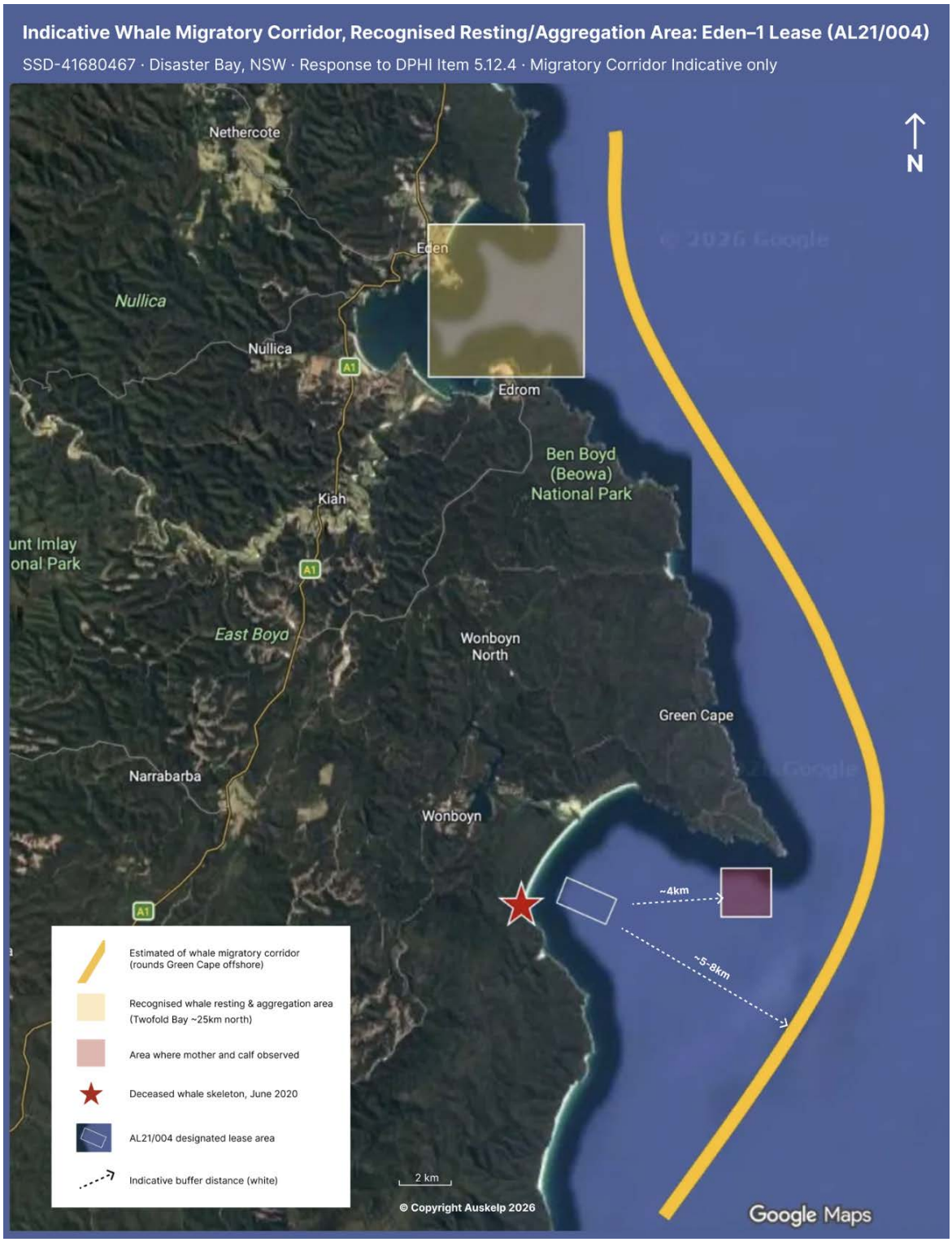

Figure 30: Indicative Whale Migratory Corridor, recognised resting & aggregation area: Eden–1 Lease (AL21/004) (Credit: Google Maps and Auskelp 2026). Note: Indicative migration corridor shown for assessment purposes only. No Commonwealth or State agency publishes a definitive local-scale whale migration corridor within Disaster Bay.

In response to the information being requested — the distance to any confirmed and recognised whale resting and aggregation area (in Twofold Bay) is approximately 25 km, and the distance to the primary whale migration corridor is estimated to be >5 km (but this could be lower if whales migrate close to Green Cape) — and is mapped at Figure 30. Finer-scale mapping of whale migration paths is not available or published by the relevant government authorities. The conclusions of the requested assessment, which rests on the available data and site specific observations, and further backed up by risk-based treatment of marine-

mammal interaction further detailed in Section 4.6 of this SRR, and detailed in EIS Sections 7.10–7.13 and 9.4.4–9.4.7.

Outcome

The additional information and citations provided quantify where possible the spatial relationship between (a) Eden-1 lease area (b) recognised whale aggregation area at Twofold Bay and, (c) estimates of the broader migratory corridor associated with Green Cape. The information concludes that the lease is located approximately 25 km from the nearest recognised whale resting and aggregation area and approximately 5 km from the broad offshore migratory corridor. The response clarifies that no Commonwealth or State agency has identified or mapped a recognised whale resting area within Disaster Bay, nor does any agency publish definitive local-scale whale migration corridors capable of being mapped at a granular scale. Accordingly, marine mammal risk assessment has appropriately been undertaken using a risk-based framework that considers regional migration behaviour, whale occurrence records, site-specific observations, taut longline infrastructure design, operational controls and implementation of the Marine Fauna Interaction Plan.

Multiple years of offshore operations, plus project scoping observations within Disaster Bay since 2019 have not identified the bay as a whale resting, aggregation or prolonged-occupancy area, and no whale interactions have been recorded during the testing program within the Project area (this however is not categoric evidence that whales do not enter the bay). These observations are consistent with the EIS conclusion that the Project is located outside recognised aggregation areas and separated from the principal offshore EAC driven migratory movement corridor.

Having regard to the indicative spatial buffers, the absence of recognised resting areas within Disaster Bay, the low-risk (taught) cultivation system, the Marine Fauna Interaction Plan and the further assessment presented within the EIS, marine mammal interaction risks are considered low and capable of being adaptively managed throughout the life of the Project.

5.13.5 Beach – Cast Kelp Deposits

The Department has requested clarification regarding the actions that would be undertaken if monitoring identifies beach-cast kelp deposits attributable to the Project.

RESPONSE

Auskelp acknowledges that detached kelp may occasionally enter the marine environment from cultivation infrastructure, particularly during storm events or harvesting operations. However, it is important to recognise that beach-cast kelp is a naturally occurring feature of the Disaster Bay coastline. Refer to Section 4.8 of this SRR for additional details and photographic evidence of wild versus farmed kelp, click link here:

Section 4.8 Microplastics and Marine Debris

Wild *Ecklonia radiata* regularly detaches from natural reef systems throughout the region and accumulates on local beaches, particularly following periods of elevated swell, storm activity and seasonal deterioration of older plants. More than two years of testing within Disaster Bay and more than three years of offshore cultivation within the Eden region have not identified any significant loss or shedding which could be attributable to cultivated kelp. Monitoring undertaken during the testing program has demonstrated that the cultivation system remains structurally intact during major storm events and that cultivated biomass is generally retained on cultivation infrastructure until harvest. Unlike wild kelp, which commonly detaches following senescence, storm damage or natural holdfast failure (including holdfast integrity retaining rock fragments), cultivated biomass is generally harvested during its active growth phase and prior to seasonal deterioration, significantly reducing the likelihood of large-scale biomass loss and subsequent beach-cast accumulation.

The Project also incorporates several design and operational characteristics that reduce the likelihood of beach-cast accumulation, including:

- offshore siting in a high-flushing open-coastal environment;

- harvest prior to crop senescence and deterioration;
- regular infrastructure inspections and maintenance;
- removal of damaged or detached cultivation material when identified; and
- ongoing monitoring of cultivation performance and biomass retention.

Notwithstanding the low likelihood of significant farm-derived beach-cast deposits, Auskelp agrees that appropriate monitoring and management measures should be implemented. Accordingly, the Environmental Management Plan includes post-storm inspections of Greenglades Beach and other accessible beaches within the vicinity of the Project where beach-cast material may reasonably accumulate.

Where monitoring identifies unusual accumulations of kelp potentially associated with Project operations, Auskelp will investigate the cause and implement appropriate management responses. Depending on the nature and extent of the accumulation, these responses may include:

- inspection of cultivation infrastructure for damage or biomass loss;
- review of recent operational activities and environmental conditions;
- modification of harvesting, maintenance or cultivation practices;
- repair or replacement of damaged infrastructure;
- temporary suspension of cultivation activities within affected areas where investigation indicates a recurring operational cause;
- increased monitoring frequency; and
- removal of beach-cast material where considered necessary and appropriate in consultation with DPIRD Fisheries and other relevant regulatory authorities.

The response adopted would be proportionate to the scale, frequency and demonstrated cause of the beach-cast event. Consistent with the adaptive-management framework described in the EIS and this SRR, monitoring results would be used to inform ongoing operational improvements and future management actions. Accordingly, Auskelp considers that the combination of offshore siting, harvesting practices, cultivation-system design, routine monitoring and adaptive-management measures provides an appropriate framework for managing the unlikely event of significant farm-derived beach-cast kelp deposits.

Further discussion of naturally occurring beach-cast kelp within Disaster Bay, methods used to distinguish wild and cultivated kelp, and observations from the offshore testing program are provided at Section 4.8 of this Submissions Response Report.

Outcome

The additional information clarifies that beach-cast kelp is a naturally occurring feature of the Disaster Bay coastline and that no significant farm-derived beach-cast accumulations have been identified during the offshore testing program. The Project incorporates design, operational and monitoring measures that minimise the likelihood of cultivated biomass becoming detached and washing ashore, including harvesting prior to senescence, routine infrastructure inspections and post-storm monitoring.

In the event that monitoring identifies beach-cast deposits attributable to Project activities, investigation, corrective action and adaptive-management responses would be implemented through the Environmental Management Plan and in consultation with NPWS and DPIRD Fisheries. Accordingly, beach-cast kelp deposits are considered capable of being effectively monitored and managed throughout the life of the Project.

5.13.6 Item 6 – Land-Based Infrastructure

The Department has requested clarification regarding the land-based facilities referred to within the EIS, including the Snug Cove hatchery facility, potential future use of facilities at Edrom, the approvals that may be required for such activities, and consultation undertaken with relevant authorities.

RESPONSE

Auskelp notes that the SSD application seeks approval for the offshore aquaculture development within Lease AL21/004 and associated marine operations. The application does not seek approval for any new buildings, roads or wharf development. References within the EIS to facilities at Snug Cove and the Edrom industrial precinct were included to demonstrate that suitable supporting infrastructure already exists within the Eden region should the Project proceed and should future operational requirements arise. These references were not intended to imply that the SSD application seeks approval for those facilities, nor that Auskelp has committed to any particular long-term processing, storage or manufacturing location.

The Project has been progressing through regulatory assessment for more than six years and remains subject to approval. As an early-stage aquaculture venture operating within a new industry sector, Auskelp is forced to avoid committing to significant land-based infrastructure investments, commercial leases or industrial processing facilities until regulatory approvals are secured and commercial viability has been demonstrated.

Existing Hatchery Operations

The Project currently operates research and development activities from the existing facility at Snug Cove, Eden. These activities comprise broodstock handling, gametophyte cultivation, seedstock production, laboratory work, equipment storage and associated research and development activities.

The SSD application does not seek approval for expansion of the Snug Cove facility beyond the activities described within the EIS. Any future modification or expansion of hatchery operations would be undertaken in accordance with the planning and regulatory requirements applying at that time.

Future Processing Activities

The EIS identifies the Pentarch industrial precinct at Edrom as the preferred location where future processing activities may occur should the Project require additional facilities. This reference was included because the precinct provides existing industrially zoned land, maritime access and supporting infrastructure within the Eden region. However, Auskelp does not currently possess, control or occupy processing facilities at Edrom and has not committed to any specific future processing arrangement. Memorandums of understanding exist between Auskelp and the owner of land and facilities located in Edrom related to future use. Any future use of facilities at Edrom, or any alternative location, would depend on a range of factors including Project approval, commercial performance, product mix, market demand, funding availability, infrastructure requirements and commercial agreements.

Importantly, any future land-based processing activities requiring separate planning approval, environmental approval, EPA licensing, development consent, lease arrangements or operational agreements would be subject to those approval processes at the relevant time. Auskelp acknowledges that permissibility does not itself constitute approval.

Port Infrastructure

Consistent with ongoing discussions held with Port Authority of NSW during assessment of the Project, Auskelp does not currently anticipate requiring access to William Allen Drive, the Edrom Multi-User Wharf or other Port Authority-managed facilities before approximately 2028 at the earliest, and potentially later depending on ocean lease approval timeframes. Should future use of Port Authority facilities be required, access would occur only under the appropriate commercial agreements, operational approvals and regulatory requirements applicable at that time.

Consultation

Consultation has been undertaken with Port Authority of NSW regarding potential future port-related requirements associated with the Project. Ongoing consultation has also occurred with Bega Valley Shire

Council and other relevant agencies throughout preparation of the EIS and assessment process. Auskelp acknowledges that any future land-based processing or manufacturing facilities may require additional approvals from Bega Valley Shire Council, the NSW Environment Protection Authority, Port Authority of NSW and other relevant agencies depending on the nature and scale of activities proposed. Such consultation would occur as part of any future approval process if and when those activities are needed. Accordingly, Auskelp considers that the SSD application provides sufficient information regarding the land-based activities directly associated with the Project. Any future expansion into industrial-scale processing, manufacturing or other land-based development would be subject to separate assessment and approval processes under the applicable planning and environmental legislation at the time.

Outcome

The additional information clarifies that the SSD application seeks approval for the offshore aquaculture development and associated marine operations, and does not seek approval for any new land-based industrial processing, manufacturing or port development.

Existing research and development activities are undertaken from established facilities and future processing arrangements remain subject to Project approval, commercial viability and separate commercial and regulatory considerations. While the EIS identifies potential future locations that may support commercial operations, no commitment has been made to a specific processing facility other than indicative Deed of Arrangements, and no approval is sought for such facilities as part of the current application, nor could they be agreed due to the regulatory approval process and the inability to determine possible approval timeframes.

Any future land-based processing, marine berths, manufacturing, storage or port-related activities requiring planning consent, environmental approval, EPA licensing, lease agreements or other statutory approvals would be subject to the relevant assessment and approval pathways applicable at that time. Accordingly, the information provided confirms that the Project can be assessed on the basis of the offshore aquaculture activities proposed under the SSD application, with any future land-based development remaining subject to separate regulatory processes when and if required.

5.13.7 Item 7 – Use of Port Authority Infrastructure

The Department requested additional consultation with Port Authority of NSW and the Department of Defence to address concerns regarding the potential use of Port Authority infrastructure and possible operational conflicts with Defence activities at the Edrom Multi-User Wharf.

RESPONSE

Auskelp notes that these matters have been the subject of direct consultation with Port Authority of NSW, including a project coordination meeting held on 27 May 2026. The outcomes of that consultation are summarised at Section 5.9 of this SRR. Importantly, the Project does not currently require access to the Edrom Multi-User Wharf, William Allen Drive or other Port Authority-managed infrastructure to commence operations. The Project is proposed as a staged development and Auskelp does not anticipate requiring access to these facilities before approximately 2028 at the earliest, and potentially later, depending on Project approval, operational performance and commercial development.

Port Authority's advice primarily related to future operational coordination, navigational safety, vessel movements, scheduling requirements and Defence priority access arrangements. These matters are operational considerations that would apply if and when future use of Port Authority infrastructure is proposed. Auskelp confirms that Defence and Royal Australian Navy operational requirements will take priority at all times. Project vessels will not operate during declared Defence exclusion periods or activities that restrict access to Port Authority infrastructure. Coordination of any future vessel movements would occur through Port Control and in accordance with the requirements of Port Authority of NSW.

During consultation, Port Authority confirmed that it will continue to act as the primary point of liaison with Defence regarding future operational requirements until such time as the Project receives regulatory approval and operational planning progresses to a level where direct engagement is required.

At this stage, no approval is sought through the SSD application for exclusive use, occupation or development of Port Authority infrastructure. Any future use of the Edrom Multi-User Wharf, William Allen Drive or associated facilities would occur subject to separate commercial agreements, operational approvals, scheduling requirements and any relevant approvals required by Port Authority of NSW and other authorities at the time.

Accordingly, Auskelp considers that the consultation undertaken with Port Authority of NSW has appropriately addressed the matters raised and confirms that no unresolved conflict has been identified between the proposed offshore aquaculture development and future Defence operations.

Outcome

Consultation undertaken with Port Authority of NSW confirms that the matters raised relate primarily to future operational coordination, vessel scheduling and Defence priority access arrangements rather than the suitability of the Project itself.

The Project does not require immediate access to Port Authority infrastructure in Edrom and no significant interaction with Defence operations is anticipated during the early stages of Project implementation. Port Authority has confirmed ongoing engagement regarding future operational requirements and will continue to act as the primary liaison point with Defence until Project approval is obtained and operational planning progresses.

Any future use of Port Authority infrastructure would occur subject to separate commercial agreements, operational approvals and scheduling requirements. Accordingly, the information provided demonstrates that the potential use of Port Authority infrastructure can be appropriately managed and does not present a constraint to assessment of the proposed offshore aquaculture development.

5.13.8 Item 8 – Engagement with Aboriginal Parties

The Department notes that the Eden Local Aboriginal Land Council (LALC) has objected to the Project on the basis of insufficient ongoing engagement. While consultation undertaken during preparation of the Aboriginal Cultural Heritage Assessment Report (ACHAR) is acknowledged, the Department has requested evidence demonstrating that consultation with Registered Aboriginal Parties (RAPs) continued following completion of the ACHAR in 2024. The Department notes that ongoing consultation is a requirement of the Heritage NSW consultation guidelines and was specifically recommended within the ACHAR, including the provision of project updates to RAPs at least every six months. Accordingly, the Department has requested that Auskelp provide records and evidence of ongoing consultation activities undertaken with RAPs since completion of the ACHAR.

RESPONSE

Auskelp acknowledges the importance of meaningful engagement with Aboriginal stakeholders and recognises that consultation is an ongoing process rather than a single event. Auskelp has sought throughout the assessment process to engage respectfully, transparently and constructively with Registered Aboriginal Parties regarding the Project and its potential impacts.

The concerns raised by the Department relate to the objection submitted by Eden LALC citing perceived lack of consultation following completion of the ACHAR. Auskelp respects Eden LALC's right to express that view. However, Auskelp does not agree that there has been an absence of engagement.

As requested, Auskelp has prepared and attached the Eden-1 Aboriginal Consultation Register, which documents communications with Registered Aboriginal Parties as well as direct engagement with Eden LALC between April 2025 and June 2026. The register records: nine project updates and statutory notifications issued to Registered Aboriginal Parties; and a further six items of direct independent correspondence with Eden LALC (prior to the their objection); and four formal consultation meetings with Eden LALC representatives (prior to the objection). These engagements addressed Project design, environmental assessment, regulatory approvals, collaboration opportunities, hatchery operations, restoration opportunities, Aboriginal Ranger participation, partnership opportunities, monitoring activities and ongoing consultation pathways.

Importantly, Eden LALC is the Registered Aboriginal Party with which Auskelp has had a significant level of direct engagement throughout the assessment process. Consultation commenced following introductions facilitated through the University of Wollongong and continued through multiple meetings and direct correspondence. The most recent meeting was held on 16 December 2025 (and post objection on 26 May 2026 – to get clarity on concerns regarding consultation and discuss future engagement).

The Project has now been progressing through the regulatory system for more than six years. Throughout that period Auskelp has attempted to maintain honest and proactive engagement with RAP stakeholders while recognising that the Project remains unapproved and that many aspects of future operations remain uncertain. As a small company seeking to establish a new aquaculture industry in New South Wales, Auskelp has endeavoured to balance meaningful consultation with the practical realities of a lengthy and evolving assessment process.

Aboriginal Consultation & Communication Register

Project: Eden-1 Kelp Aquaculture Project – Seaweed Aquaculture Lease, Disaster Bay
Application: SSD-41680467 (State Significant Development)
Proponent: Auskelp Pty Ltd (ABN 33 644 315 613)
Prepared: 5 July 2026

As requested by DPHI, the following tables consolidate Auskelp's communications to Registered Aboriginal Parties (RAPs), direct correspondence with Eden Local Aboriginal Land Council (Eden LALC), and consultation meetings with Eden LALC in connection with the Eden-1 Kelp Aquaculture Project to date. It is provided as a factual record of engagement.

Table 12 Communications to Registered Aboriginal Parties

Project updates and statutory notices issued to all Registered Aboriginal Parties.

Date	Subject	Content	From
21 Apr 2025	AusKelp – Project Update for Traditional Owners and RAPs	Distribution of the 2024 Annual Report.	info@auskelp.net
24 Aug 2025	AusKelp – Project Update – Frequently Asked Questions 2025 (FAQ-1)	FAQ document circulated to Traditional Owners and Registered Aboriginal Parties.	info@auskelp.net
11 Sep 2025	AusKelp – Project Update – Annual Report FY25	FY25 Annual Report distributed ahead of EIS submission.	info@auskelp.net
4 Nov 2025	AusKelp – Project Update – Frequently Asked Questions: Additional (FAQ-2)	Second FAQ addressing additional questions following the Wonboyn information session.	info@auskelp.net
7 Apr 2026	Important Notice: Auskelp EIS Submitted	Notification that DPHI accepted the EIS and that it would proceed to public exhibition.	info@auskelp.net
10 Apr 2026	Important Notice – Auskelp EIS on Exhibition	Formal notice that the mandatory public exhibition period had commenced, with the NSW Planning Portal link.	info@auskelp.net
11 Apr 2026	Auskelp EIS on Exhibition (re-issue)	Exhibition notice re-sent after a recipient reported difficulty opening the original email.	info@auskelp.net
3 May 2026	Auskelp EIS on Exhibition – 6 Days Remaining	Reminder that six days remained to lodge submissions on the proposal.	info@auskelp.net
1 Jun 2026	Eden-1 Kelp Aquaculture Project – Registered Aboriginal Parties Update	Update on the SSD assessment process and EIS exhibition outcomes, including next steps before the Independent Planning Commission.	info@auskelp.net

Table 13 Direct Correspondence with Eden LALC

Direct email correspondence between Auskelp and Eden LALC, including the introduction facilitated by the University of Wollongong. Content is recorded at summary level.

Date	Subject	Content	From
3 Aug 2025	Re: Introductions – AusKelp and Eden LALC	Introduction facilitating direct engagement between Auskelp and Eden LALC, acknowledging aligned objectives.	Michelle Voyer (UOW)
4 Aug 2025	Re: Introductions – AusKelp and Eden LALC	Follow-up to the introduction; request for a meeting (in person) and outline of availability.	Christopher Ride (Auskelp)
7 Aug 2025	Re: Introductions – AusKelp and Eden LALC	Thank you for the proposal, start process next week.	Eden LALC representative
7 Aug 2025	Re: Introductions – AusKelp and Eden LALC	Thanks for the opportunity to present; proposal to meet at the Eden LALC Keeping Place; request to bring the Auskelp Operations Manager.	Christopher Ride (Auskelp)
8 Aug 2025	RE: Introductions – AusKelp and Eden LALC	Acknowledgement of correspondence, Eden LALC request to hold off introduction meeting with Uncle BJ until Eden LALC Board have had a chance to have internal discussions.	Eden LALC representative
20 Oct 2025	Re: Invitation – 23 October 2025	Invitation to Eden LALC CEO to attend Auskelp Circular Economy MOU signing.	Kyran Crane (O2E)
20 May 2026	Re: Proposed Meeting – Seaweed Aquaculture Lease, Disaster Bay – Eden 1 (SSD-41680467)	Formal request for a Teams meeting regarding the Eden-1 seaweed aquaculture EIS – meeting accepted.	Jake Bailey (Auskelp)
24 June 2026	Re: Follow Up - Post Meeting - Seaweed Aquaculture Lease, Disaster Bay	Meeting follow up and further meeting request with Eden LALC CEO.	Jake Bailey (Auskelp)
6 July 2026	Re: Follow Up - Post Meeting - Seaweed Aquaculture Lease, Disaster Bay	Meeting with new CEO agreed, to be scheduled.	Eden LALC representative

Table 14 Meetings with Eden LALC

Consultation meetings involving Eden LALC. All meetings held via Microsoft Teams, does not include phone calls which have not been recorded.

Date	Event	Platform	Status	Discussion topics
7 Aug 2025	Gudu Aquaculture and Restoration Project – Auskelp presentation of project to date	Teams (42 min)	Confirmed / attended	Presented AusKelp Eden-1 project, technical processes, ocean testing and regulatory approval process. Discussed opportunities to collaborate. Proposed further meeting with senior Eden LALC representatives.
25 Aug 2025	Consultation convened by Eden LLS on behalf of Uncle BJ and Eden LALC	Teams (92 min)	Confirmed / attended	Presented Auskelp project. Support expressed for Eden-1 kelp farming initiative, with statement that no opposition noted from local First Nation families or Uncle BJ. Discussed project history since 2019; Marine Bioproducts CRC partnership; kelp lifecycle and East Australian Current effects; nutrient modelling; the half-hectare test-area licence; the storm-tested kelp variety enabling offshore farming; swimming and shark queries addressed; regulatory progress including the draft EIS and EPBC

Date	Event	Platform	Status	Discussion topics
				approval; the importance of effective communication with the Aboriginal community; and a proposed further meeting with senior Eden LALC representatives and Uncle BJ.
16 Dec 2025	Auskelp and Eden LALC consultation	Teams (52 min)	Confirmed / attended	Discussion of shared facilities and partnership opportunities; hatchery licensing and approvals; collaboration on restoration; Eden LALC's long-standing aquaculture ambitions; potential involvement of Aboriginal Rangers in lease monitoring and biofouling removal; coordination to avoid competing for the same aquaculture grant; in-principle discussion of seed stock for testing; and a proposed further meeting with senior Eden LALC representatives.
26 May 2026	Auskelp & Eden LALC – Seaweed Aquaculture Lease Discussion	Teams (105 min)	Confirmed / attended	Substantive discussion of the lease proposal and the ongoing engagement pathway. Discussed opposition to the kelp farm based on lack of engagement. Discussed path forward and further options to collaborate.

Communication Frequency Summary

Communication to RAPs: Nine communications across the period 21 April 2025 to 1 June 2026 — an average of roughly one every six weeks. Updates ran on a broadly quarterly cadence through 2025, intensifying to five communications within the April–June 2026 public exhibition window.

Direct Eden LALC correspondence (in addition to communications to RAPs): Eight emails, concentrated in multiple phases — August 2025, October 2025, December 2025, Post objection meeting May 2026 and follow up June 2026.

Meetings: Four confirmed Teams consultations (August 2025 x 2, December 2025 and May 2026), spaced across the assessment period and totalling approximately 280 minutes of direct discussion.

Outcome

The information above demonstrates genuine and sincere communication with Registered Aboriginal Parties has continued following completion of the ACHAR and includes regular project updates, direct correspondence and multiple consultation meetings with Eden LALC.

Auskelp acknowledges that meaningful engagement is an ongoing process that requires time, trust and certainty regarding the future of a project. The Eden-1 Project has now been progressing through environmental assessment, scientific testing and regulatory review for more than six years, while remaining subject to significant uncertainty regarding approval outcomes, timing and future implementation. As a small company attempting to establish a new aquaculture industry in New South Wales, Auskelp has simultaneously undertaken extensive laboratory development, offshore testing, environmental assessment, government consultation and regulatory compliance activities. Auskelp has nevertheless sought to maintain regular communication with Registered Aboriginal Parties throughout the assessment process and remains committed to doing so.

Importantly, Auskelp's objective has never been simply to satisfy a regulatory requirement. The Company continues to seek genuine and constructive engagement with Aboriginal stakeholders and hopes that, should the Project ultimately receive approval, there will be opportunities to develop longer-term collaborative relationships in areas such as marine stewardship, environmental monitoring, restoration activities, training and employment. Having regard to the consultation undertaken, the Aboriginal Consultation Register, the findings of the ACHAR and Auskelp's ongoing commitment to engagement, the

Department's request for additional information regarding consultation with Aboriginal stakeholders is considered to have been addressed.

5.13.9 Item 9 – Maritime Heritage

The Department noted that Figure 3 of the Aboriginal Cultural Heritage Assessment Report (ACHAR) published in July 2024 identifies a shipwreck as "impacted" immediately south-east of the proposed lease area, while the EIS and ACHAR concluded that no impacts to maritime heritage would occur. The Department also noted that the feature is not shown on Figure 51 of the EIS and requested a detailed Maritime Archaeological Assessment (MAA) in response to advice received from Heritage NSW.

RESPONSE

Auskelp acknowledges the matters raised by Heritage NSW and has addressed both issues identified in the agency's advice.

Maritime Archaeological Assessment (Item 1)

In response to Heritage NSW's request, Auskelp commissioned a Maritime Archaeology Assessment (MAA) prepared by a suitably qualified and experienced maritime archaeologist accredited through the Australian Institute for Maritime Archaeology and recognised by Heritage NSW.

See Section 5.8 Heritage NSW for more details.

The MAA is provided as: Appendix RB5 Maritime Archaeology Assessment Eden-1 Kelp Aquaculture Farm.

Clarification of Unnamed Wreck in ACHAR Figure 3 (Item 2)

Auskelp has investigated the provenance of the unnamed wreck symbol shown in Figure 3 of the ACHAR. Auskelp had no control over the shipwreck image added into the ACHAR by Biosis. No supporting records, source citations, underlying survey data or heritage database references have been identified that explain the inclusion of the wreck symbol at the location shown on the figure. It must also be noted that the wreck location is well outside the Project area. On the available evidence, the annotation appears to have been included in error during preparation of the ACHAR mapping.

See Section 5.8 Heritage NSW for more details.

Accordingly, Auskelp concludes that no known shipwreck is present at the location depicted in Figure 3 of the ACHAR documents provided by Biosis in July 2024, and that the annotation to a wreck site appears to have been included in error.

Outcome

A Maritime Archaeology Assessment has been provided as it relates to the Project (as requested by Heritage NSW), and no evidence has been found to substantiate a wreck in the location documented by Biosis, see Section 5.8 NSW Heritage response for more details.

5.13.10 Item 10 – Social Impact Assessment

The Department recommended preparation of a standalone project-specific Social Impact Assessment (SIA) in accordance with the Social Impact Assessment Guideline for State Significant Projects, noting that the University of Wollongong and Blue Economy CRC studies were not solely prepared for the SSD application and that some matters identified within the Guideline were not presented within a single consolidated assessment document.

RESPONSE

Auskelp respectfully acknowledges the Department's request and has prepared Appendix RB4 Social Impact Assessment Adequacy Report (SIAA) to address this matter directly.

The threshold question to consider is not simply whether a standalone SIA has been prepared, but what depth of SIA the SEARs actually require. Item 15 of the SEARs does not prescribe the scale or standalone nature of the assessment; it requires an SIA prepared in accordance with the Department's State Significant

Development Guidelines. The SIA Guidelines promote a "proportionate and risk-based" approach to environmental planning and assessment; the SIA Guideline requires the SIA to be targeted and proportionate to the project's likely social impacts, and expressly contemplates that a project with no or low social impacts may warrant an assessment of only a few pages, with substantial assessments required only for large or high impact projects. Proportionality to the Project's social-risk profile has been taken as the governing test; and the Project does not result in multiple significant social impacts, and it is against that benchmark the adequacy of the assessment has been provided.

Applied to Eden-1, that test is decisive. As confirmed by the Project's Registered Environmental Assessment Practitioner (REAP #R80014), the Project's social-risk profile sits at the lower end of the scale. It is an offshore, sub-surface longline kelp farm located approximately 1.1 kilometres offshore, in an area designated by DPIRD Fisheries as available for aquaculture, cultivating the native species *Ecklonia radiata*, with no feed, fertiliser or chemical inputs, no land acquisition, no displacement of residents, no loss of public access, and no new demand on housing or community infrastructure. The EIS structured risk assessment (Sections 8 and 9) assessed every social and community risk category as low or negligible, with none rated moderate or higher. A directly comparable local benchmark is available to guide the likely social impact. The established Wonboyn Lake oyster industry sits closer to the community, is significantly more visible and more continuously present, and has a greater direct interface with the populated estuary. It has a greater impact on visual amenity and sedimentation, is physically closer to the Nature Reserve, and has a (documented) higher environmental and biosecurity risk profile.

The comprehensive SIA already completed does not merely meet the proportionality requirement — it significantly exceeds it. The fact that some supporting studies were undertaken independently does not diminish their relevance or evidentiary value. Rather, independently commissioned research undertaken under separate governance and ethics processes provides an additional source of objective evidence regarding community perceptions and social considerations. Appendix RB4 identifies which material is project-specific, which is independently generated, and how each component contributes to satisfying the requirements of the Guideline.

Appendix RB4 SIAA consolidates, documents and demonstrates the substantial body of project-specific social-impact assessment, community engagement, stakeholder consultation and independent research already completed. Social-impact assessment for the Eden-1 Project has been undertaken continuously since 2020 and includes project-specific community surveys, structured stakeholder interviews, public information sessions, direct community engagement, targeted industry workshops, Aboriginal stakeholder consultation, a completed Aboriginal Cultural Heritage Assessment Report, formal public exhibition, multiple agency consultations, supplemented by independent Project-related research undertaken by the Proponent and the University of Wollongong under the University's own ethics approval. As a result of this comprehensive program of works, the community issues and proportionality are well understood and documented.

Appendix RB4 SIAA maps each requirement of the NSW Social Impact Assessment Guideline (and Item 15 of the SEARs) against the existing assessment record, and demonstrates that every element of the Guideline has been addressed through the Environmental Impact Statement, the supporting technical studies, the community engagement program, the public exhibition process and this Submissions Response Report.

The report concludes that the Project has been subject to a social-impact assessment process that significantly exceeds what a proportionate, risk-based assessment requires for a Project of this profile, and that preparation of a further standalone consultant-led SIA would not create or consolidate any new information not already before the Department, and would not improve the understanding of the Project's social impact.

Outcome

The assessment outcome remains unchanged from the Environmental Impact Statement. Appendix RB4 demonstrates that the Project satisfies Item 15 of the SEARs and the NSW Social Impact Assessment Guideline through a proportionate, project-specific and evidence-based assessment process. Having regard to the Project's low social-risk profile and the extensive social assessment, community engagement

and independent research already undertaken, the material before the Department exceeds that reasonably required to assess the Project's social impacts.

5.13.11 Item 11 – Statutory Context

The Department noted that Section 1.3 of the EIS did not state the correct State Significant Development trigger for the Project and requested that the correct statutory trigger be identified.

RESPONSE

Auskelp accepts the Department's clarification.

The correct State Significant Development trigger is Schedule 1, Section 2(2) of State Environmental Planning Policy (Planning Systems) 2021, being:

"Development for the purpose of aquaculture located in an environmentally sensitive area of State significance."

The Eden-1 Kelp Aquaculture Farm is development for the purpose of aquaculture and is proposed within coastal waters that fall within an environmentally sensitive area of State significance for the purposes of the Planning Systems SEPP. The Project is therefore State Significant Development and requires development consent under Part 4, Division 4.7 of the Environmental Planning and Assessment Act 1979.

The statutory context section of the EIS should be read subject to this clarification. This correction does not alter the assessment pathway, permissibility, environmental assessment undertaken, public exhibition process, consent authority, or requirement for determination as State Significant Development.

Outcome

The correct SSD trigger has been clarified as Schedule 1, Section 2(2) of State Environmental Planning Policy (Planning Systems) 2021. The Project remains State Significant Development, and the correction does not alter the assessment pathway or conclusions of the EIS.

5.13.12 Item 12 – Employment Generation

The Department requested clarification regarding employment generation associated with the Project and noted that employment estimates should distinguish between jobs directly associated with the proposed offshore aquaculture operation and employment that may arise from future land-based processing activities that do not form part of the SSD application. The employment estimates presented within the EIS described the broader employment potential of the emerging kelp industry.

RESPONSE

The SSD application relates principally to the establishment and operation of the offshore kelp cultivation lease and associated marine operations. Employment directly associated with the approved offshore aquaculture activities is expected to include:

Table 15 Kelp Farm Employment Category Table

Employment Category	Indicative Roles
Vessel operations	Farm manager, skipper, deckhands, marine technicians
Farm deployment and maintenance	Aquaculture technicians, divers, marine operations staff
Hatchery services	Hatchery manager, hatchery technicians
Ocean seedstock deployment / Harvest	Aquaculture staff (seeding/harvest)
Environmental monitoring and compliance	Environmental officers, monitoring personnel
Management and administration	Project management, administration and coordination

At full operational scale, the Project is expected to support approximately 30 full time staff (as stated in the EIS) with 14–18 direct full-time equivalent positions associated with offshore cultivation, environmental monitoring and aquaculture management covered under this SSD.

Additional employment associated with processing, product manufacturing, logistics, food production, biostimulant production, nutraceuticals and other downstream value-add activities may occur in the future and is therefore separated as part of the direct employment outcomes of the Project, however, without the ocean farming component, these downstream employment opportunities cannot be realised.

Notwithstanding this distinction, the Project represents an important enabling step in establishing a new marine cultivation industry in New South Wales and has the potential to support broader employment opportunities within the region over time should commercial cultivation prove successful.

Outcome

The additional information clarifies 14–18 direct full-time equivalent positions related to ocean farming estimates associated with the SSD application related to offshore cultivation, environmental monitoring and aquaculture management activities. Future employment associated with downstream processing, manufacturing and value-add industries has been excluded as requested from the direct employment estimates. Accordingly, the employment benefits attributable to the proposed development have been clarified for assessment purposes.

5.13.13 Item 13 — Conflicts with Existing Fishing Activities

Public submissions raised concerns regarding conflicts with existing fishing grounds and commercial fishing areas. The EIS states that the site has been selected to minimise overlap with primary fishing grounds and known commercial fishing areas. The Department recommended that further detail, including mapping, of the known primary fishing grounds and commercial fishing areas be provided to demonstrate how these areas have been avoided as part of site selection for the proposed lease area, together with details and images of any other existing marine uses relevant to the assessment.

RESPONSE

Auskelp accepts the Department's recommendation. The commercial and recreational fishing context, the operational profile of the lease, and the basis on which the site was selected are addressed at EIS Section 7.16 (Commercial and Recreational Activities), EIS Section 9.2.4 (Exclusion of Commercial Fishers), EIS Section 3.5 (site selection), and at Section 4.16 of this report (Commercial Fishing) and Section 4.17 of this report (Recreational Fishing), with mitigation set out in Risk Tables 10 and 24. The response below consolidates that material, sets out the mapping available, and identifies the data constraints that affect the spatial characterisation.

Characterisation of fishing activity in Disaster Bay

Disaster Bay falls within DPIRD Fisheries grid Site Code I10-29 (and I10-20). DPIRD Fisheries catch records confirm that fewer than six fishing businesses have operated in Disaster Bay in the last ten years (email confirmation by NSW DPIRD, 18 November 2025), and DPIRD privacy provisions accordingly prevent the release of aggregated catch information for the area below that six-business threshold. Within that constraint, the following fisheries are known to operate:

- school prawn (*Metapenaeus macleayi*) trawl fishery;
- gummy shark longline fishery;
- trap and line operations;
- abalone and sea urchin diving; and
- octopus and incidental net operations permissible within the bay.

Auskelp does not represent the lease area as vacant or under-utilised marine space, and confirms the position set out at Section 4.16 that Disaster Bay is an active, productive and lawfully-used commercial fishing ground.

Demonstration of avoidance

To address the Department's recommendation, Auskelp provides the following information to demonstrate the avoidance achieved through site selection (see Figure 31 below):

- **Prawn trawl ground** – targeting a depression at the northern end of Wonboyn Beach lies more than 2.5 km from the lease boundary; no overlap occurs.
- **Nearshore salmon gillnet grounds** – the lease is sited 1.1 km offshore, and is estimated not to materially encroach upon the nearshore gillnet grounds (EIS Section 9.2.4). Nets are commonly set in shallow coastal waters, often within a few hundred metres of shore and generally inside the 20 m depth contour; no expected overlap.
- **Abalone and sea urchin grounds** – operating on the perimeter of the bay over established wild rocky-reef and kelp habitat on the bay perimeter; the lease is located over mobile sandy substrate in water depths greater than 20 m, and does not intersect the rocky-reef habitat on which the abalone and sea urchin fisheries depend (refer Section 4.5); no overlap occurs.
- **Other marine uses** – the lease avoids recognised navigation routes, port approaches and moorings (EIS Section 3.5), with shipping-density mapping confirming that AIS-equipped vessels rarely transit the bay (refer EIS Figure 42 and EIS 9.2.4). The nearest aquaculture leases (Wonboyn oyster production) lie approximately 2.9 km from the lease and operate in a hydrologically separate estuarine environment; no overlap occurs.

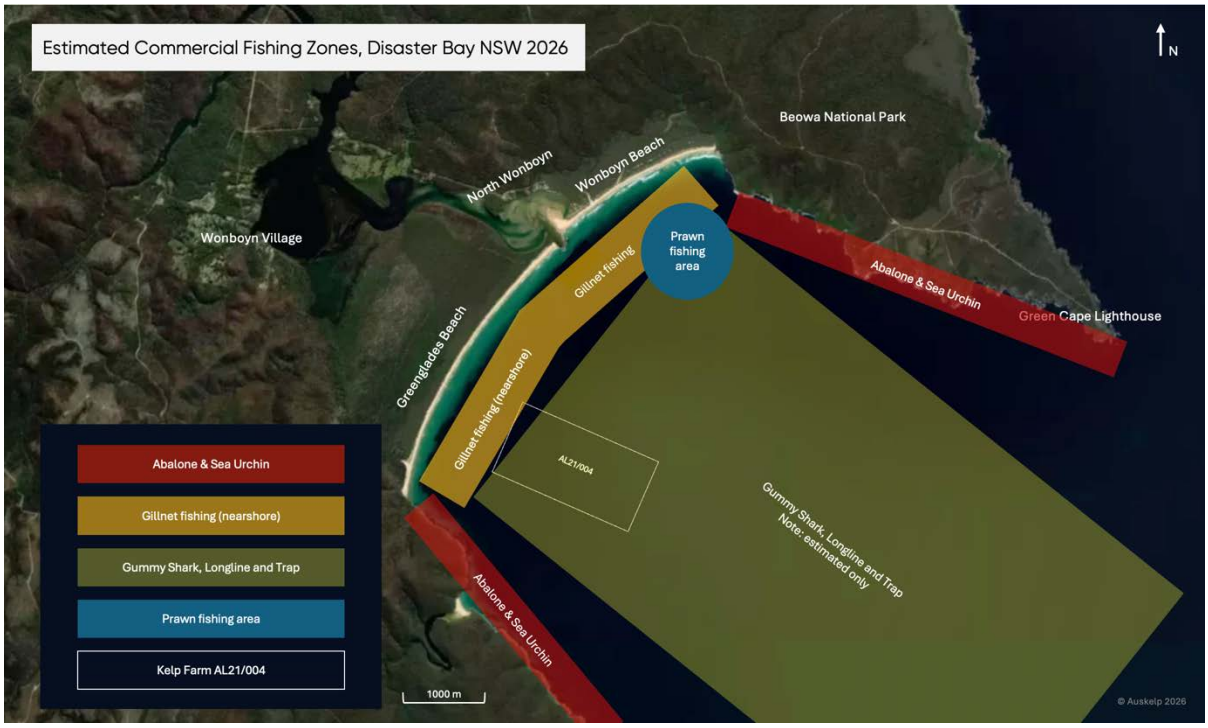

Figure 31: Estimated Commercial Fishing Zones, Disaster Bay NSW 2026, includes abalone & sea urchin dive areas, salmon gillnet fishing zones, prawn fishing zones, gummy shark (estimated), longline and trap fishing locations, plus kelp farm AL21/004 lease area (Source: Google Maps, Auskelp).

Gummy shark longline fishery – spatial data limitation

Auskelp wishes to be transparent with the Department regarding the one fishery for which avoidance cannot be accurately mapped. The submission of Mr Michael Ballantyne (Licensed Fishing Business No. 450) asserts his continued and sustained gummy shark longline use of Disaster Bay (refer also Section 4.16). It is also noted, that despite ongoing consultation and general support from other Eden Fishers, Mr Ballantyne was the only fisher to object to the Project (and has remained a consistent objector since the Auskelp Eden Community Consultation Meeting 14 September 2023). The Proponent has stayed in direct email, phone and text communication with Mr Ballantyne to ensure open communication, consultation and information flow regarding the Project.

Auskelp made direct requests both verbally and via documented text message to Mr Ballantyne (11 December 2025) for the number of fishing days spent in Disaster Bay and the number of longlines transecting the proposed lease, to enable accurate mapping of that fishery; those requests were declined. Restrictions imposed by the DPIRD privacy threshold prevents Auskelp from independently and definitively mapping the gummy shark ground to the frequency and resolution sought. As such, estimates on fishing frequency in Disaster Bay by the gummy shark operator is limited to local knowledge, the sighting of the operator in the area, and wharf discussions, which is an unreliable method to definitively map gummy shark line fishing over the proposed lease area. It is our understanding that Mr Ballantyne's licence ranges from Bermagui (north) to Cape Howe (south) and extends from the shoreline to the 3 nm state waters limit representing >1300 km^2 in total area. We believe he has additional access to Commonwealth waters to target other fish species. Each licence, of which we understand Mr Ballantyne has two licences, allows for him to shoot 1200 hooks in a single setting, IE he could legally set 2400 hooks at a time over multiple kilometres of set line at any one time.

Auskelp made a written request to DPIRD Fisheries on 12 June 2026 [as the agency holding the relevant VMS and catch data] to consider providing additional information to Auskelp (for this response) regarding VMS Gummy Shark fishing data for Disaster Bay, but unfortunately no return information has been provided.

Outcome

Site selection has actively avoided the prawn trawl, nearshore gillnet, and reef-based dive fisheries. A spatial overlap with the gummy shark longline fishery is acknowledged; the precise extent of that overlap is constrained by the operator declining our multiple data requests. DPIRD privacy provisions preclude the information being made available to the Proponent. It is critical to note, the gummy shark fishery is not confined to Disaster Bay alone. Gummy shark are a highly mobile species occurring throughout south-eastern Australian waters, and commercial fishing activity may occur across NSW waters and adjacent Commonwealth waters. Accordingly, the longline and trap entitlements held by operators are not specific to, nor dependent upon, the proposed lease area. Importantly, 95% of Disaster Bay remains accessible. With no expected overlap with gillnet, prawn, urchin and abalone industries. These matters support a finding that fishing-activity conflicts have been assessed, acknowledged, and duly informed the location of the lease area in Disaster Bay.

5.13.13a Item 13a (additional) Commercial Fishing — Financial Compensation

Description of the category

This category captures the matters raised regarding financial compensation for loss of access to commercial fishing grounds within the proposed lease area. It is treated separately from the broader Commercial Fishing category at Section 4.16 because it concerns a discrete legal and statutory question — the entitlement to, and the appropriate forum for any claim for compensation — rather than the operational or spatial impact of the lease. The category is raised principally by Mr Michael Ballantyne (Licensed Fishing Business No. 450), the holder of two Gummy Shark entitlements exercisable in Disaster Bay, who has placed the Department on formal notice of his intention to seek compensation for lost fishing ground and lost income in the event the lease is granted and his access is curtailed.

Number of submissions in support: 0.

Number of submissions in objection: 1 (Public).

Number of submissions providing comment: 0.

Representative quote — Objection

"I currently take approximately $150,000 per annum in Gummy Shark from Disaster Bay … I wish to place the Department on clear and unambiguous notice: should this licence be granted and my fishing grounds lost or compromised as a result, I will be seeking full compensation for lost fishing ground and lost income." — Michael Ballantyne, Licensed Fishing Business No. 450 (Greigs Flat, NSW)

RESPONSE

Auskelp acknowledges Mr Ballantyne's clear statement of his intention to seek compensation for any loss of access and income arising from the Project, and respects the seriousness with which that position is advanced.

The statutory framework governs compensation, not development consent

The administration of commercial fishing entitlements under the *Fisheries Management Act 1994* (NSW), and any question of compensation, access adjustment, or industry restructure arising from a change in the lawful use of NSW marine waters, is a matter for DPIRD Fisheries as the responsible regulator. It is not a matter for the Proponent, nor a matter that can or should be determined through development consent under the *Environmental Planning and Assessment Act 1979* (NSW). The grant of development consent for the Project, and the separate grant of an aquaculture lease and permit by DPIRD Fisheries, are distinct statutory acts; any consequence for fishing entitlements, and any compensation or adjustment mechanism available in respect of those entitlements, arises (if at all) under the fisheries framework administered by DPIRD Fisheries, and is properly directed to that agency.

For that reason, Auskelp respectfully submits that the compensation claim foreshadowed by Mr Ballantyne is appropriately considered by DPIRD Fisheries in its assessment of the proposal and in the exercise of its functions under the FM Act, rather than resolved within the development assessment before the consent authority.

Outcome

Mr Ballantyne's two Gummy Shark entitlements are not extinguished, restricted, or materially reduced in their face value by the grant of an aquaculture licence over the 200-hectare lease area. The entitlements remain in force across the broader estimated >1300 km^2 Gummy Shark fishery.

Auskelp's position is that the matter is governed by the *Fisheries Management Act 1994* framework administered by DPIRD Fisheries, and is not a matter that can be resolved by the Proponent or through development consent under the *Environmental Planning and Assessment Act 1979*. The continued availability of 95% of Disaster Bay and the wider fishery, the referral of the claim to the responsible regulator, and Auskelp's commitment to continued good-faith operational engagement with NSW fishers— together support a finding that the compensation matter has been acknowledged, correctly characterised within the statutory framework, and directed to the appropriate decision-maker.

5.13.14 Item 14 — Kelp Industry Sector Model and Value Chain

The EIS refers to the proposed kelp farm as part of a circular-economy model and describes the various components of kelp operations — laboratory, hatchery, ocean-based farm, post-harvest processing and sales to various markets — but does not provide a process diagram illustrating the kelp industry value chain or defining the limits and scope of the SSD application within that chain. The Department recommended that a kelp industry life-cycle process flow and/or value chain be provided, illustrating the various components of the sector model — including inputs, outputs, by-products and recycling of residual materials, from hatchery through to end sale — with the scope of the SSD application delineated and described within that model.

RESPONSE

Auskelp accepts the Department's recommendation, but considers the request highly detailed in light of the low risk nature of the Project. A summary Eden-1 kelp industry sector model and value-chain process flow has been prepared and is provided as Figure 33, 34 and 35. The figures illustrate the life-cycle of the operation — from wild sori collection and hatchery propagation, through offshore cultivation, harvest and post-harvest processing, to end-market sale — and identifies at each stage the principal inputs, outputs, by-products and circular-economy residual loops. The sections below describe the model and delineates the scope of this SSD application within it.

The value-chain stages

The integrated life-cycle comprises:

1. **Native seedstock collection —** fertile sori tissue is collected from wild *Ecklonia radiata* within 10 km of Disaster Bay during the reproductive season, using a minimum of 20 genetically distinct donor individuals supplemented by an additional 12 individuals per year post operational deployment. This activity is undertaken under DPIRD Fisheries permits.
2. **Hatchery and laboratory propagation** — sori are cleaned and treated; spores are released and cultured through the gametophyte stage to juvenile sporophytes (1–5 mm), which are seeded onto twine. The hatchery operates as a closed, recirculating, filtered-seawater system with batch traceability.
3. **Offshore cultivation** — seeded droppers are deployed within Lease AL21/004 on tensioned sub-surface longlines, and maintained (including periodic maintenance) through to harvest. The only inputs at this stage are sunlight, dissolved nutrients from oceanic upwelling, and seawater; the cultivation uses no feed, fertiliser, freshwater or chemical inputs.
4. **Harvest and onboard handling** — mature biomass is stripped from the droppers (the rope is removed from the ocean, then stored intact for reseeding the following season), with the biomass sorted for transport to shore.
5. **Post-harvest processing** — low-impact handling (dewatering, sorting, size reduction, packaging) under a zero-waste model in which 100% of harvested biomass is directed to a product stream.
6. **Markets** — fresh and dried kelp for food and functional ingredients and nutraceuticals; liquid fertiliser and biostimulants; soil conditioners; animal-feed supplements; and feedstock for cosmetic and bioplastic applications.

Circular-economy and residual material flows

Residual materials are recycled rather than disposed of wherever practicable: processing residuals are captured as value-added agricultural biostimulants and soil conditioners, closing the land–sea nutrient loop with regional regenerative agriculture; no putrescible waste is expected; worn ropes, floats and fittings are managed as General Solid Waste (non-putrescible) through licensed waste facilities; and minor blade-tip shedding at sea enters the natural nutrient cycling of the bay.

Scope of this SSD application within the model

Consistent with the land-based usage detailed in Section 5.13.6, the scope of SSD-41680467 is confined to the offshore aquaculture development within Lease AL21/004 (200 ha) and its existing Snug Cove operations.

Within the value chain:

- The hatchery and wild-seedstock collection are supporting activities conducted under existing facilities and permits. They supply the farm but involve no new land-use development under this application.
- Post-harvest processing and any land-based manufacturing will be conducted under existing facilities in Snug Cove and further approvals are not sought under this application. References to the Edrom precinct demonstrate that suitable supporting infrastructure exists with MOUs in place for Edrom facilities; any future land-based processing facility would be subject to its own planning, environmental and approvals at the relevant time, if the SSD application is approved, and the project proves economically viable.
- End markets are shown for completeness in Figure 34 and Figure 35 to illustrate the circular-economy rationale; they are potential commercial outcomes, not components of the development consent.

Formalising Circular Economy MOU

On 23 October 2025, a Circular Economy memorandum of understanding (MOU) was signed between Auskelp, Ocean2Earth (O2E), Bega Circular Cooperative and Marine Bioproducts CRC (MBCRC) to support investment in the research and development, and scale up of offshore kelp farming as a critical ingredient for

biostimulant manufacture, with real-world agriculture testing in the Bega Valley Shire. The event was attended by representatives from multiple government departments and key stakeholders with a live demonstration of kelp harvesting and processes being used to produce effective hydrolysates from *Ecklonia radiata*. See Figure 32 below.

Figure 32: MOU signing between MBCRC, Auskelp, Ocean2Earth, Bega Circular Economy to support the multimillion-dollar circular economy research and development program for kelp and biofertiliser manufacture in the Bega Valley. L to R: Russell Fitzpatrick (Mayor, Bega Valley Shire Council), Andrew Taylor (Bega Circularity Cooperative), Christopher Ride (Auskelp), John Gunn (Chairman, MBCRC), Kyran Crane (Ocean2Earth), Tim Crane (Ocean2Earth and indigenous member), October 2025 Snug Cove, Eden (Credit: Auskelp)

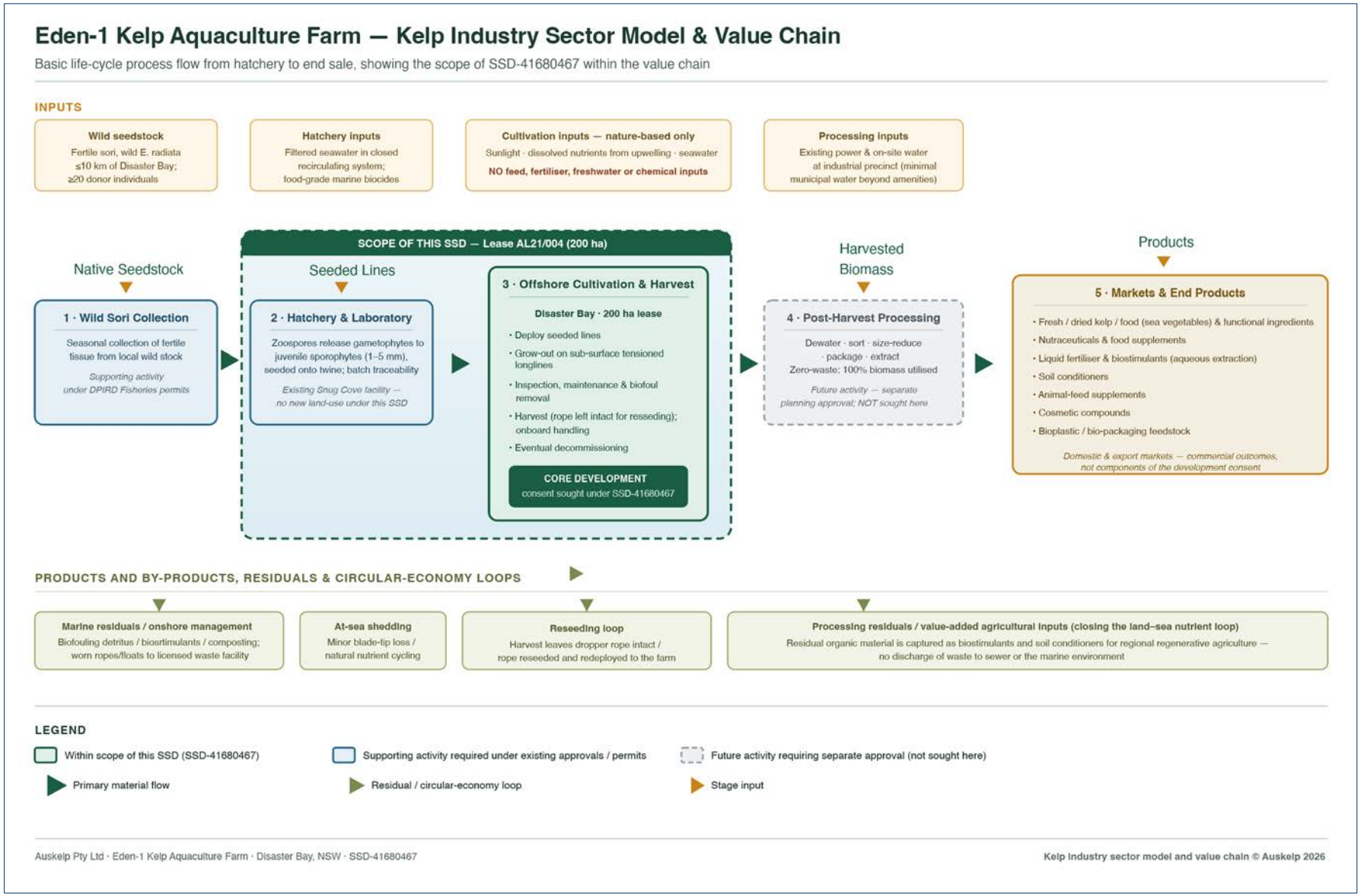

Figure 33: Eden-1 Kelp Aquaculture Farm – Kelp Industry Sector Model and Value Chain, basic life-cycle process flow from hatchery to end sale, showing scope of SSD-41680467 within value chain. (Source: Auskelp 2026)

Eden-1 Circular Economy Profile

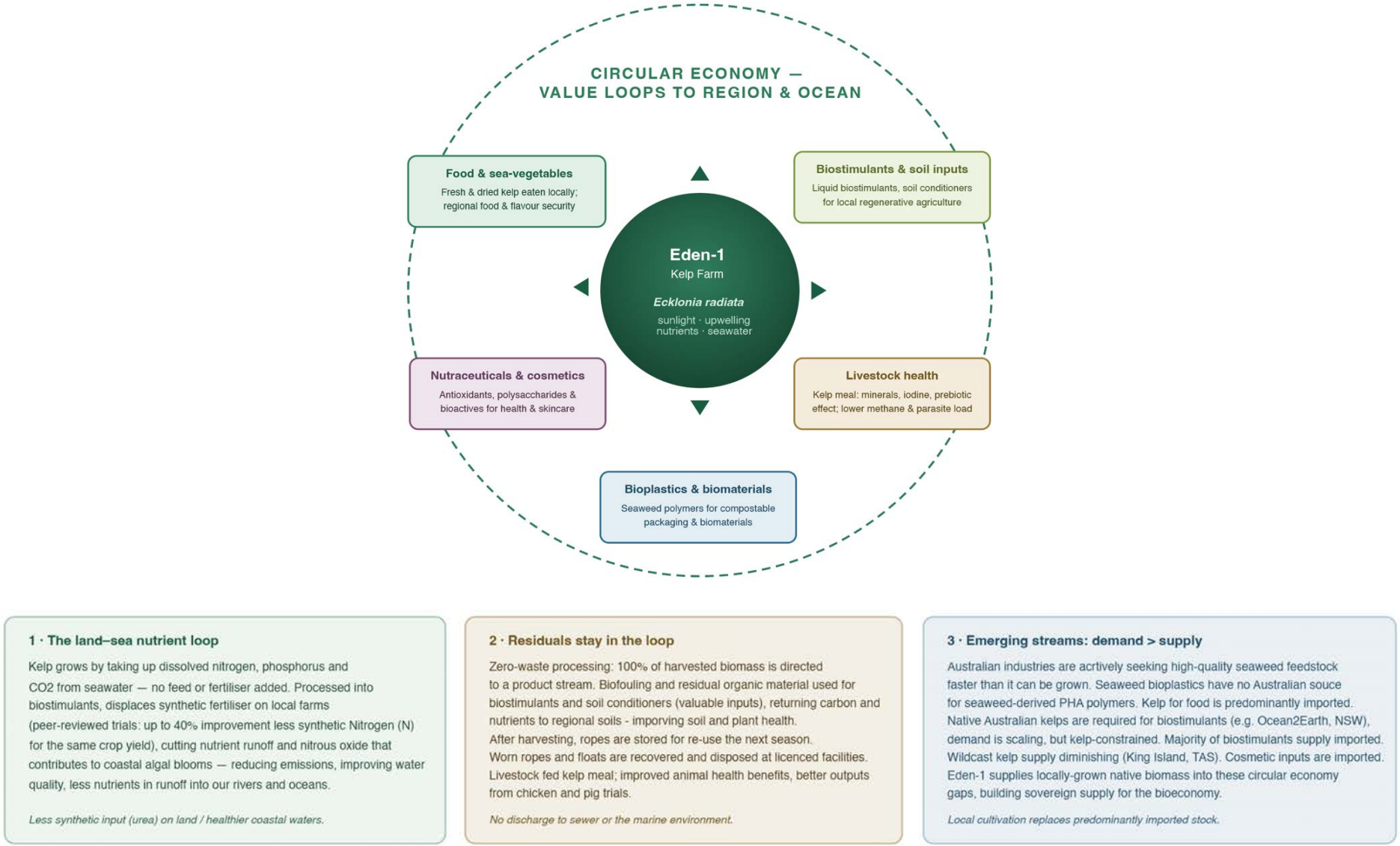

Figure 34: Eden-1 summary of circular economy value loops to region and ocean (Source: Auskelp 2026).

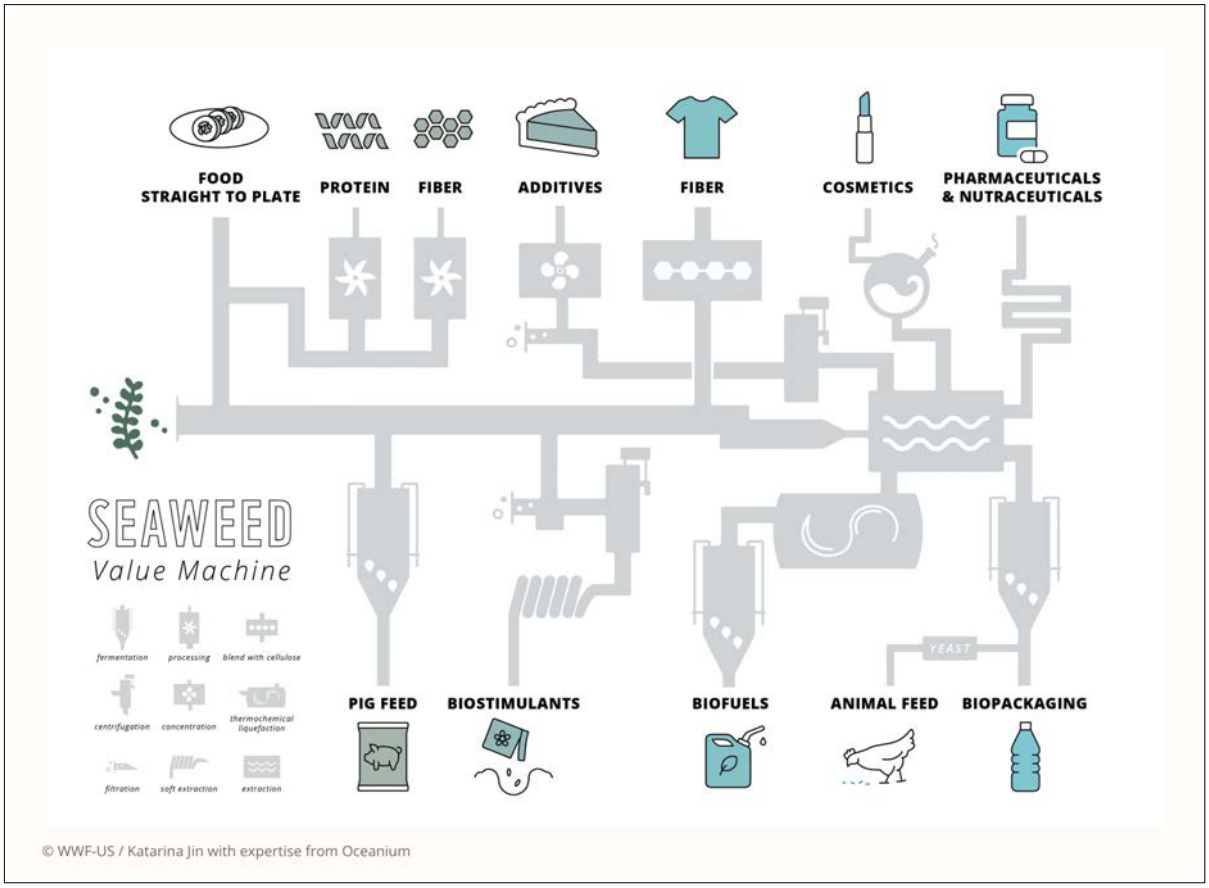

Figure 35 Seaweed end-use products (Source: World Wildlife Fund USA).

Outcome

The Proponent has provided a consolidated industry sector model and value-chain process flow and end-use products requested by the Department. The value-chain and circular-economy diagrams demonstrate the expected lifecycle of cultivated *Ecklonia radiata*, from wild seedstock collection and hatchery propagation through to offshore cultivation, harvesting, processing and end-market utilisation. They also identify the principal inputs, outputs, by-products and residual material pathways associated with each stage of the industry model.

The information delineates the scope of SSD-41680467 within that value chain. The Project is limited to the offshore aquaculture component of the industry, including cultivation infrastructure, marine operations, harvesting and associated offshore activities within Lease AL21/004. The figures confirm that post-harvest processing, manufacturing, product formulation, food production, nutraceutical production, biostimulant manufacturing and other downstream industrial activities do not require additional approvals outside of existing facilities, or cannot be anticipated at this time and therefore do not form part of the current SSD application and would require separate approvals where necessary.

The information also demonstrates that the Project has been designed around circular-economy principles, including reuse of cultivation infrastructure, utilisation of harvested biomass across multiple product streams, recovery of processing residuals as agricultural inputs, and minimisation of waste generation. The assessment confirms that the Project does not rely on feed, fertiliser, freshwater or chemical inputs during cultivation and that residual organic material can be directed to beneficial reuse pathways rather than disposal. Accordingly, the Department's request for a kelp industry sector model and value-chain assessment has been addressed.

5.13.15 Item 15 – Infrastructure Design

The Department requested clarification regarding the dimensions of the cultivation floats, the size of the lease-corner navigation buoys, and the lighting characteristics associated with the navigational aids.

RESPONSE

Auskelp accepts the Department's recommendation and provides the following clarification.

The cultivation system utilises commercially available marine-grade floats designed for offshore aquaculture applications. The floats are carbon black or orange in colour depending on operational requirements and are attached directly to the cultivation longlines.

Table 16 Float Specifications

Float Volume	Approximate Diameter
55 L float	470 mm diameter
85 L float	545 mm diameter

The exact dimensions may vary slightly between manufacturers; however, buoyancy characteristics remain broadly equivalent and these dimensions reflect the anticipated float sizes required. These floats are attached directly to the cultivation longlines and will be partially submerged below the water surface, depending on cultivation configuration, floats may operate partially submerged or as part of fully submerged cultivation systems.

Corner Navigation Buoys

The lease area will be marked by four corner IALA-compliant (International Association of Marine Aids to Navigation and Lighthouse Authorities) navigation buoys in accordance with the requirements of the Port Authority of NSW, Transport for NSW Maritime and other relevant maritime authorities. The final buoy specification, signage, top-markings, colours and navigation requirements remain subject to approval by Port Authority of NSW and TfNSW Maritime at the time of deployment.

Table 17 Dimensions of the navigation buoy (excluding markings)

Feature	Dimension
Diameter	1250 mm
Float height above water (freeboard)	1180 mm
Base Height above water (Freeboard)	335 mm
Depth below waterline	550 mm

Corner Marker Dimensions

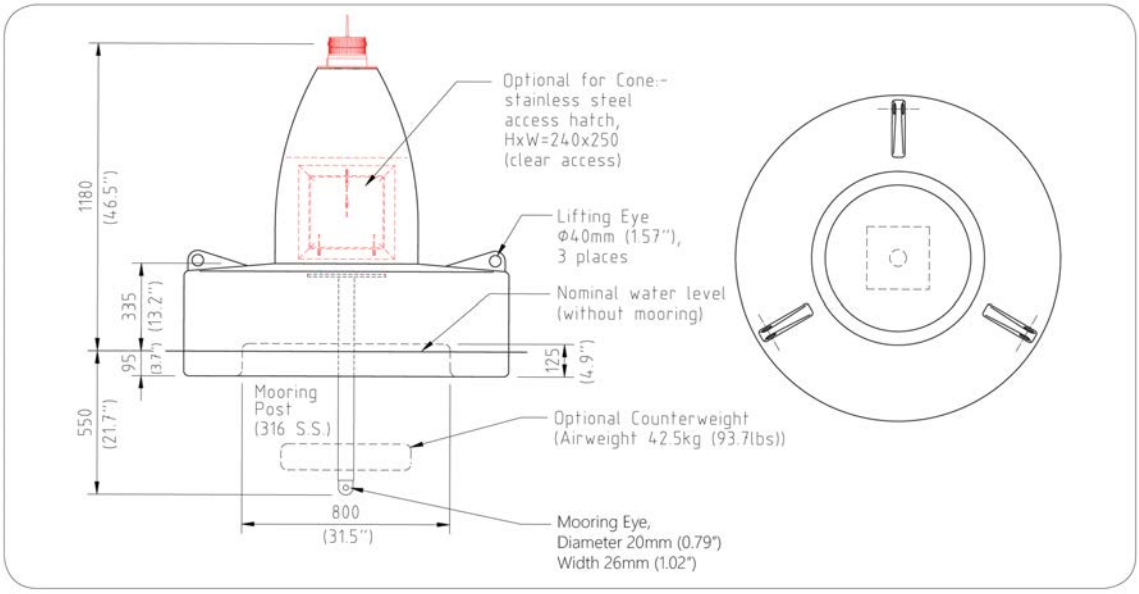

Figure 36: Corner Marker dimensions IALA-Compliant schematic with dimensions (Source: Sealite).

Auskelp confirms that the Project proposes to adopt the visibility range required by the relevant authorities, being one nautical mile (1 NM), consistent with the approved Jervis Bay Commercial Shellfish Aquaculture project. In the Jervis Bay assessment, Roads and Maritime Services (now TfNSW Maritime) confirmed that corner-buoy lights visible from one nautical mile were appropriate for aquaculture lease marking.

The navigation buoys proposed for Eden-1 are capable of accommodating a range of approved marine lanterns, including lanterns rated from 1 NM through to 4 NM. As agreed with regulators, Auskelp will deploy the required lighting specification, flash characteristics and visibility range determined through ongoing consultation with the Port Authority of NSW and TfNSW Maritime at the time of deployment. These agencies may alter navigation settings, signage and lighting requirements as they determine to ensure safe navigation requirements are met. It should be noted that the lease-corner navigation buoys represent maritime safety infrastructure rather than cultivation infrastructure. The corner markers are required to clearly identify the lease boundary for navigational purposes and form part of the maritime safety framework applicable to offshore aquaculture developments.

Outcome

The dimensions and characteristics of the proposed cultivation floats and corner navigation buoys have been clarified. Cultivation floats comprise spherical buoyancy devices ranging from approximately 470 mm to 545 mm in diameter and are generally positioned at or below the water surface. The IALA certified lease-corner navigation buoys are approximately 1250 mm in diameter and 1180 mm in freeboard height (plus markings) and are required for maritime safety purposes. Consistent with established NSW aquaculture precedent, navigation lighting is anticipated to be visible from approximately 1 NM and operated at the intensity determined by the relevant maritime authorities. Final buoy, top markings and lighting specifications will be determined via confirmation from Port Authority of NSW and TfNSW Maritime.

5.13.16 Item 16 – Assessment of Significance

The Department requested that Assessments of Significance be provided for all listed threatened species in accordance with the Fisheries Management Act 1994 (FM Act) and the requirements of DPIRD Fisheries. Auskelp has responded directly to the request from DPIRD Fisheries and has prepared Appendix RB1 Assessments of Significance, which contains Assessments of Significance for the threatened species identified by DPIRD Fisheries as relevant to the Project. The assessments have been prepared in accordance with the requirements of the Fisheries Management Act 1994 and address the matters raised by DPIRD Fisheries during agency consultation.

RESPONSE

The threatened-species assessment process, biodiversity context and species-specific considerations are discussed at Section 5.5 of this Submissions Response Report and should be read in conjunction with Appendix RB1 Assessments of Significance.

Outcome

The Assessments of Significance requested by the DPHI and DPIRD Fisheries have been prepared and are provided at Appendix RB1. The assessments address the threatened species in accordance with the Fisheries Management Act 1994 (FM Act) and support the conclusions presented within the EIS and Section 5.5 of this report. The findings of Appendix RB1 ASR are consistent with the broader biodiversity assessment undertaken for the Project, including the Commonwealth EPBC Act determination that the Project is a Not Controlled Action, the State determination that a Biodiversity Development Assessment Report (BDAR) is not required, and the Protected Species Register prepared for the Project. Together, these assessments concluded that the proposed development is unlikely to result in significant impacts on threatened species, populations, ecological communities or biodiversity values. Accordingly, Auskelp considers that the Department's request has been addressed.

5.13.17 Item 17 – Biologically Important Areas

The Department noted that the EIS states that eight Biologically Important Areas (BIAs) are relevant to the proposed lease location but does not identify those areas or provide an assessment of potential impacts.

RESPONSE

Auskelp accepts the Department's recommendation. The reference to eight Biologically Important Areas is found at EIS Section 7.10 Flora and Fauna and originates from the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) EPBC Act Protected Matters Search Tool (PMST) report prepared for the Project area. The PMST identifies eight Biologically Important Areas that may occur within, or overlap with, the broader search area surrounding Disaster Bay.

Biologically Important Areas are ecological areas identified by the Commonwealth as supporting particular life-history functions such as breeding, foraging, migration or aggregation for protected marine species. The presence of a BIA within a PMST search area does not indicate that a significant impact will occur, but rather identifies ecological values that should be considered during environmental assessment.

The PMST was used as a screening tool during preparation of the EIS and informed the biodiversity, marine ecology and marine fauna assessments. Potential impacts on the species and ecological functions represented by these BIAs have subsequently been assessed throughout the EIS, including Sections 7.10–7.13, the Marine Fauna Interaction Plan, the Protected Species Register and Appendix RB1 Assessments of Significance.

Biologically Important Areas (BIA) that may overlap the lease area as identified by the EPBC Act Protected Matters Search Tool (PMST) are detailed in Table 18, as follows:

Table 18 Biologically Important Areas Table

Species	Biological Function	Relationship to Lease Area	Assessment Outcome
1/ Indo-Pacific Bottlenose Dolphin (*Tursiops aduncus*)	Breeding	Species may occur within Disaster Bay and surrounding coastal waters	No significant impact predicted. Low interaction risk addressed through vessel-management procedures and operational controls.
2/ Short-tailed Shearwater (*Ardenna tenuirostris*)	Foraging	Regional offshore foraging habitat	No significant impact predicted. No habitat removal or disturbance of foraging resources.
3/ Short-tailed Shearwater (*Ardenna tenuirostris*)	Foraging (second BIA)	Regional offshore foraging habitat	No significant impact predicted.
4/ White-faced Storm-Petrel (*Pelagodroma marina*)	Foraging	Offshore pelagic habitat	No significant impact predicted.
5/ Shy Albatross (*Thalassarche cauta cauta*)	Foraging	Offshore pelagic habitat	No significant impact predicted.
6/ Grey Nurse Shark (*Carcharias taurus*)	Foraging	Species may occur within the wider region	Low risk. No critical habitat loss, reef disturbance or prey-resource reduction predicted.
7/ Pygmy Blue Whale (*Balaenoptera musculus brevicauda*)	Foraging	Regional offshore waters	No significant impact predicted. No alteration of foraging habitat or prey availability anticipated.

8/ Humpback Whale (*Megaptera novaeangliae*)	Migration (northbound and southbound)	Regional migration corridor offshore of Green Cape	Assessed in EIS 9.4.4, 9.4.6, 9.4.8, Marine Fauna Interaction Plan (Appendix RC5) and Section 4.6 and 5.13.4 of this SRR. Risks considered low and manageable.

The Project has assessed potential impacts on ecological values through the Protected Species Register (EIS Section 9.4), Marine Fauna Interaction Plan, Benthic Ecology and Fish Assemblage and Seabed Habitat Assessment (Elgin 2025, EIS Appendix A9), additional Appendix RB1 Assessments of Significance, and the broader biodiversity assessment presented within the EIS. Importantly, the Commonwealth Department of Climate Change, Energy, the Environment and Water determined on 20 June 2025 that the Project is "not a controlled action" under the Environment Protection and Biodiversity Conservation Act 1999 (Cth), indicating that the Project is not expected to have a significant impact on matters of national environmental significance, including protected marine species and associated ecological values. In addition, both DCCEEW and DPHI determined that a Biodiversity Development Assessment Report (BDAR) was not required for the Project.

The assessment undertaken for the EIS demonstrates that the proposed cultivation system does not involve habitat clearing, dredging, blasting, reclamation, discharge of pollutants, introduction of non-native species or removal of natural marine habitat, removal of critical habitat. Potential interactions with marine mammals, seabirds, sharks, turtles and other protected species have been assessed and are subject to management measures, operational controls and ongoing monitoring commitments.

Accordingly, while eight Biologically Important Areas have been identified within the PMST search area, the assessments completed for the Project conclude that the proposed development is unlikely to result in any significant impact on the ecological functions for which those areas were identified.

Outcome

The eight Biologically Important Areas identified by the EPBC Act Protected Matters Search Tool have been listed and assessed. The assessment confirms that the Project is not expected to result in the loss, fragmentation or degradation of any identified Biologically Important Area. Potential interactions with protected marine fauna have been comprehensively assessed through the RC5 Marine Fauna Interaction Plan, Protected Species Register (EIS Section 9.4 and 9.4.6) and Appendix RB1 Assessment of Significance Report. Consistent with the Commonwealth "Not Controlled Action" determination and the State biodiversity assessment outcomes, the Project is deemed unlikely to have a significant impact on any identified Biologically Important Area, flora or fauna. Accordingly, the Department's request has been addressed.

5.13.18 Item 18 – Vessel Movements

The Department noted that different sections of the EIS refer to different vessel movement estimates, including two references to 0-2 return vessel trips per day, and the remaining as 0–3 vessel movements per day. The Department requested clarification of the expected vessel movements under a worst-case operating scenario and confirmation that vessel-strike and acoustic assessments have been undertaken on that basis.

RESPONSE

Auskelp clarifies the Department's request that the Project has been assessed using 0-3 trips per day under normal operations and 0-6 trips per day during installation periods as detailed in EIS 4.12.1, see Table 19 :

Table 19 Vessel Movement Table

Project Stage	Maximum Vessel Activity
Operations (inspection, maintenance, monitoring and harvesting)	Up to 0–3 return vessel trips per day between shore facilities and the lease area
Construction and Deployment	Up to 0–6 return vessel trips per day between shore facilities and the lease area

Construction, deployment, cultivation, maintenance and harvesting activities are limited to two vessels; one primary vessel and one smaller support vessel as detailed in EIS Section 9.3.2 Marine Vessel and Vehicular Transport. This materially limits the number of movements per day to the lease area. The vessel-strike assessment presented within the EIS was undertaken on the basis of the Project's maximum operational envelope rather than typical daily activity. Vessel activity during routine operations is expected to be substantially lower for much of the year, with vessel attendance varying according to cultivation cycles, weather conditions, monitoring requirements and harvest schedules as detailed in the EIS.

Importantly, vessel speed represents the primary determinant of marine-fauna strike risk rather than vessel frequency alone. Project vessels will operate at low speeds when approaching, departing and operating within the lease area, consistent with marine safety requirements and the Marine Fauna Interaction Plan. Additional mitigation measures include:

- implementation of the Marine Fauna Interaction Plan;
- trained vessel operators and marine-fauna observation protocols;
- avoidance procedures where marine mammals are observed in proximity to operations;
- daylight operations wherever practicable;
- cessation or modification of activities where required under fauna-interaction procedures; and
- ongoing recording and reporting of marine-fauna observations.

The acoustic assessment is source-based, not movement-count based. Noise impact at a receptor is governed by the sound power of the loudest source and its attenuation over distance — not by how many times that source occurs in a day. The assessment therefore adopts the most conservative approach available: it takes the single loudest activity across the entire project life-cycle — the hydraulic screw-anchor drill at approximately 110 dB(A) at source during construction, and approximately 84 dB(A) for routine vessel operation — and models its propagation to the nearest land-based location at Greenglades Beach, some 1,100 metres away, using the ISO 9613-2 algorithm under meteorological conditions deliberately chosen to favour sound transmission toward the shore. Even on that worst-case basis, drilling noise attenuates to approximately 48–50 dB(A) and vessel noise to approximately 18–20 dB(A) at the shoreline — the latter effectively imperceptible, and both at or below the natural ambient range of 47–60 dB(A) generated by wind and surf along this exposed coast. Because this conclusion is driven by source level and distance, it is entirely independent of the number of vessel movements.

Outcome

The vessel movement assumptions adopted for the Project have been clarified. The maximum assessed vessel activity comprises 0-6 return vessel trips per day during construction and deployment activities during daylight hours at less than 15 knots consistent with the EIS Appendix B9 Construction and Deployment Management Plan, and complying with Appendix RC5 Marine Fauna Interaction Plan, and 0-3 return vessel trips per day during routine operations. The Project's acoustic assessment is source-based rather than movement-count based: noise at a receptor is governed by the sound power of the loudest source and its attenuation over distance, and the modelled result at the nearest shoreline holds equally whether the farm generates three or up to six vessel movements per day. Having regard to the relatively low vessel numbers, low vessel speeds, implementation of the Marine Fauna Interaction Plan and associated operational controls, the risk of vessel strike and vessel-related disturbance to marine fauna remains low and capable of being appropriately managed throughout the life of the Project.

5.13.19 Item 19 – Concurrent Construction and Operation

The Department noted that the Project will be deployed in stages and queried whether construction and operational activities may occur concurrently, potentially resulting in vessel movements exceeding those assessed within the EIS.

RESPONSE

Auskelp accepts the Department's recommendation. As described in the staging framework and the Eden-1 Construction and Deployment Management Plan, deployment of cultivation infrastructure will occur progressively throughout the life of the Project. Construction, deployment, cultivation, maintenance and harvesting activities are limited to two vessels; one primary vessel and one smaller support vessel as detailed in EIS Section 9.3.2 Marine Vessel and Vehicular Transport. This materially limits the number of movements per day to the lease area.

As clarified at Section 5.13.18 of this report, the Project has been assessed on the basis of a maximum of:

- up to **six return vessel trips per day** during construction and deployment activities; and
- up to **three return vessel trips per day** during routine operations.

The construction and deployment scenario represents the highest vessel-activity envelope anticipated for the Project and therefore already captures periods where deployment and operational activities may occur simultaneously. Accordingly, concurrent construction and operation do not create a higher vessel-movement scenario than that already assessed within the EIS and Construction and Deployment Management Plan.

Outcome

The relationship between staged deployment and operational activities has been clarified. Vessel movements remain within the maximum vessel activity envelope of 0-6 vessel movements per day assessed for the Project under all scenarios. Accordingly, no additional impacts pathways are anticipated.

5.13.20 Item 20 – Risk Evaluation

The Department considers that the risk evaluation presented in the EIS may underestimate the potential consequences associated with a number of identified risks. Specifically, the Department notes that all assessed consequences were assigned either a Negligible (0) or Minor (1) rating, including risks relating to structural integrity failure, biosecurity incidents, marine-fauna entanglement and vessel strike. The Department considers that, should such events occur, the resulting consequences may be more significant than reflected in the current assessment and that the overall risk profile may therefore be understated.

RESPONSE

Corrction to the Department's request: the EIS assessed consequences of risks were assigned either a Negligible (0) or "Low (1-6)" risk rankings (not "Minor (1)" as the Department has claimed).

Auskelp has reviewed the four risks specifically identified by the Department — Structural Integrity (EIS Section 9.2.3), Biosecurity (EIS Section 9.4.2), Entanglement (EIS Section 9.4.4) and Vessel Strike (EIS Section 9.4.5) — against the risk assessment framework and the evidence base. Having completed that review, Auskelp considers the existing risk ratings remain appropriate and consistent with the adopted methodology. The review undertaken, together with the supporting rationale and Eden-1 Kelp Aquaculture Farm — Risk Breakdown Table 20, is provided below.

Risk framework

The EIS applies the National ESD Reporting Framework (Fletcher et al., 2004; revised 2020), an established environmental risk-assessment framework widely used in Australian fisheries and aquaculture management and consistent with the SEARs for the Project.

Under that framework, likelihood and consequence are assessed separately. Likelihood considers the probability of an event occurring, while consequence considers the magnitude of impact at the scale of the stock, ecosystem or community (EIS Table 15). The framework does not assess consequence based solely on the severity of an isolated incident affecting an individual animal or a single component of infrastructure.

For example, a Low (1-6) consequence is defined as a potentially detectable but minimal impact on ecosystem structure, function or dynamics, while the equivalent protected-species descriptor states that some individuals may be impacted but there is no impact on the stock. Severe / High /Extreme consequences (7-19) anticipate effects that are detectable at the stock, ecosystem or community level.

Accordingly, a consequence rating of Negligible or Minor does not imply that an adverse event cannot occur. Rather, it reflects an evidence-based conclusion that any impact arising from such an event would not be expected to result in measurable effects at the stock, ecosystem or community scale assessed by the framework.

5.13.20.1 Structural integrity and stability – longline infrastructure (EIS Section 9.2.3)

Likelihood: Possible (4) – some evidence to suggest this is possible
Consequence: Minor (1) - possibly detectable but minimal impact on structure, function or dynamics; some are impacted but no impact on stock.
Risk value: Low (4)

Required level of management: No specific additional management is needed, but low-level monitoring of the issue may be required. Any current management should continue, as the risk ranking is based on the current management in place.

Adopted level of management: Monitoring and Maintenance Plan; Emergency Response Plan; Environmental Management Plan.

Summary

A higher consequence rating would require failure types or consequences that are capable of generating impacts detectable at a stock, ecosystem or community scale.

The cultivation system is designed around independently anchored backbone lines secured using helical screw anchors at both ends. Should a partial failure occur, infrastructure should remain attached and recoverable rather than becoming free-floating debris. Recovery procedures are established through the Environmental Management Plan and Emergency Response Plan.

The infrastructure system has been engineered against biomass loading assumptions significantly exceeding operational harvest loads. During the testing program, cultivation infrastructure successfully remained deployed through multiple major storm events, including mean wave heights exceeding 6 metres, without any loss of cultivation infrastructure.

Auskelp therefore considers the "Possible (4) – some evidence to suggest this is possible" and "Minor (1) – possibly detectable but minimal impact on structure, function or dynamics; some are impacted but there is no impact on stock" consequence rating remains appropriate. Consistent with a precautionary approach, the Project supported by implementation of the RC5 Marine Fauna Interaction Plan, RC2 Emergency Response Plan and ongoing monitoring. As such the risk value of "Low (4)" is appropriate; no specific additional management is needed, but low-level monitoring of the issue may be required. Any current management should continue, as the risk ranking is based on the current management in place.

5.13.20.2 Biosecurity – genetics, disease and introduced pests (EIS Section 9.4.2)

Likelihood: Rare (2) - may occur in exceptional circumstances
Consequence: Negligible (0) - impacts unlikely to be measurable at the scale of the stock, ecosystem, or community level against background variability.
Risk value: Negligible

Required level of management: Nil.

Adopted level of management: Biosecurity Plan; Biosecurity Risk Assessment; Environmental Management Plan; Emergency Response Plan.

Summary

Additional information was requested regarding Biosecurity by DPIRD Fisheries and DCCEEW during agency consultation.

All matters raised have been comprehensively addressed in Section 5.5 and Section 5.12 and further detailed in Appendix RB2 Biosecurity Risk Assessment, RC3 Biosecurity Plan and RC2 Emergency Response Plan.

Unlike shellfish aquaculture, Eden-1 does not involve the translocation of non-local stock, filter-feeding organisms or known aquatic animal disease vectors. Kelp is not recognised as a vector for disease to any other flora or fauna. The cultivated species, *Ecklonia radiata*, is native to Disaster Bay and sourced from local donor populations within 10 kilometres of the lease area. The operation utilises no feed, fertiliser, antibiotics, genetic modification, pesticides or chemical inputs and produces no sediment or nutrient discharge.

Ecklonia radiata is not included within Australia's National List of Reportable Diseases of Aquatic Animals and there are currently no nationally listed reportable diseases for macroalgae. Across the testing program there have been no reportable disease detections and no marine-pest detections of concern.

Having regard to the global evidence, species, cultivation method, local seedstock sourcing, operational controls and extensive biosecurity management measures now incorporated into the Project, Auskelp considers the "Rare (2) - may occur in exceptional circumstances", and "Negligible" consequence rating remains appropriate.

5.13.20.3 Entanglement and ingestion of marine debris (EIS Section 9.4.4)

Likelihood: Possible (4) – some evidence to suggest this is possible
Consequence: Minor (1) – possibly detectable but minimal impact on structure, function or dynamics; some are impacted but no impact on stock.
Risk value: Low (4)

Required level of management: No specific additional management is needed, but low-level monitoring of the issue may be required. Any current management should continue, as the risk ranking is based on the current management in place.

Adopted level of management: Marine Fauna Interaction Plan; Monitoring and Maintenance Plan; Emergency Response Plan.

Summary

Entanglement risk is recognised as an important consideration because any interaction involving a marine mammal may be significant for the individual animal involved. However, the consequence framework assesses impacts at the stock level rather than at the individual-animal level.

The Eden-1 cultivation system consists of tensioned, sub-surface longlines located approximately one metre below the water surface, supported by high-visibility ropes and helical screw anchors. The system contains no netting, no fishing gear, no slack horizontal rope systems and no looped spat-catching structures associated with known entanglements.

Research has indicted no documented whale entanglement associated with commercial kelp farming globally. The international literature reviewed by the Project, together with the operational history of longline aquaculture in Twofold Bay, Jervis Bay and elsewhere in Australia has not identified documented cetacean entanglement associated with comparable longline systems.

Auskelp therefore considers the "Possible (4) – some evidence to suggest this is possible" and "Minor (1) – some are impacted but there is no impact on stock" consequence rating remains appropriate. Consistent with a precautionary approach, the likelihood rating remains Possible and is supported by implementation of the RC5 Marine Fauna Interaction Plan, RC2 Emergency Response Plan and ongoing monitoring. As such the risk value of "Low (4)" is appropriate; no specific additional management is needed, but low-level monitoring of the issue may be required. Any current management should continue, as the risk ranking is based on the current management in place.

5.13.20.4 Vessel strike and acoustic pollution (EIS Section 9.4.5)

Likelihood: Remote (1) – never heard of, but not impossible
Consequence: Minor (1) – possibly detectable but minimal impact on structure, function or dynamics; some are impacted but no impact on stock.
Risk ranking: Low

Required level of management: No specific additional management is needed, but low-level monitoring of the issue may be required. Any current management should continue, as the risk ranking is based on the current management in place

Adopted level of management: Marine Fauna Interaction Plan, Monitoring and Maintenance Plan

Summary

Disaster Bay is an infrequently trafficked marine environment relative to Twofold Bay and other Australian commercial ports and shipping areas proven to be whale pathways or aggregation areas. Project-related vessel movements comprise 0-3 return trips per day during operations and 0-6 return trips per day during construction and deployment activities, consistent with the worst-case vessel-movements. Vessel speeds are generally below 15 knots and activities are undertaken predominantly during daylight hours with observers in place.

The Project uses relatively small vessels, incorporates marine-fauna observer procedures, vessel speed controls, compliance with approach-distance requirements and operational measures described within the Marine Fauna Interaction Plan with appropriate observer protocols. No high-energy acoustic activities are proposed.

Auskelp therefore considers the likelihood "Remote (1) – never heard of, but not impossible" and consequence "Minor (1) – possibly detectable but minimal impact on structure, function or dynamics; some are impacted but there is no impact on stock" rating remains appropriate. As such the risk value of "Low (1)" is appropriate; no specific additional management is needed, but low-level monitoring of the issue may be required. Any current management should continue, as the risk ranking is based on the current management in place.

Table 20 Eden-1 Kelp Aquaculture Farm — Risk Breakdown

Structural Integrity, Biosecurity, Entanglement and Vessel Strike & Acoustic — risk rating elements and management plan status. Descriptor wording reproduced from EIS Tables 14 (likelihood), 15 (consequence) and 17 (required levels of management). NSW Case ID SSD-41680467.

Risk (EIS ref)	Likelihood	Consequence — standard level	Consequence — impact on protected species	Risk value	Ranking	Risk rating requires a management plan?	Management plan implemented?
Structural integrity & stability – longline infrastructure (EIS 9.2.3)	**4 — Possible:** "Some evidence to suggest this is possible."	**1 — Minor:** "Possibly detectable but minimal impact on structure, function or dynamics."	**Minor (1):** "Some are impacted but there is no impact on stock."	4	Low	**No** "No specific additional management is needed, but low-level monitoring of the issue may be required."	**Yes** Monitoring & Maintenance Plan; Emergency Response Plan; Environmental Management Plan
Genetics, disease & introduced pests (biosecurity) (EIS 9.4.2)	**2 — Rare:** "May occur in exceptional circumstances."	**0 — Negligible:** "Impacts unlikely to be measurable at the scale of the stock, ecosystem, or community level against background variability."	**Negligible (0):** "Almost none are impacted."	0	Negligible	**No**	**Yes** Biosecurity Plan; Biosecurity Risk Assessment; Environmental Management Plan; Emergency Response Plan
Entanglement & ingestion of marine debris (EIS 9.4.4)	**4 — Possible:** "Some evidence to suggest this is possible."	**1 — Minor:** "Possibly detectable but minimal impact on structure, function or dynamics."	**Minor (1):** "Some are impacted but there is no impact on stock."	4	Low	**No** "No specific additional management is needed, but low-level monitoring of the issue may be required."	**Yes** Marine Fauna Interaction Plan incl. Entanglement Avoidance Protocol; Monitoring & Maintenance Plan; Waste Management Plan; Emergency Response Plan
Vessel strike & acoustic pollution (EIS9.4.5)	**1 — Remote:** "Never heard of, but not impossible."	**1 — Minor:** "Possibly detectable but minimal impact on structure, function or dynamics."	**Minor (1):** "Some are impacted but there is no impact on stock."	1	Low	**No** "No specific additional management is needed, but low-level monitoring of the issue may be required."	**Yes** Marine Fauna Interaction Plan, Monitoring and Maintenance Plan, Construction Deployment Management Plan

Note on the "Risk rating requires a management plan" column:

Under the Risk Evaluation under the National Ecologically Sustainable Development (ESD) Risk Assessment Framework (Fletcher et al., 2004; revised 2020) framework's required-levels-of-management thresholds, a documented management response is only triggered at Moderate ("Immediate management is required"). At Negligible the required level is "Nil" and at Low it is "no specific additional management is needed but low-level monitoring may be required." None of assessed risks reached Moderate or above based on Plans already adopted.

Management response exceeds level required by framework

The reviewed risks and the overall Project are supported by management measures that reduce the risk levels to the published risk levels.

Adopted management plans are as follows:

- Monitoring and Maintenance Plan;
- Environmental Management Plan;
- Emergency Response Plan;
- Biosecurity Risk Assessment;
- Biosecurity Management Plan;
- Marine Fauna Interaction Plan;
- Entanglement Avoidance Protocol; and
- Waste Management Plan.
- Construction Deployment Management Plan
- Decommissioning Management Plan

Outcome

In response to the Department's request, Auskelp has reviewed the likelihood and consequence ratings for the four identified risk categories against the adopted risk framework, the available scientific evidence, the testing-program outcomes and the management measures proposed for the Project. The outcome of that review is summarised in Sections 5.13.20.1-4 and Table 20 confirm that the existing risk ratings remain appropriate. The review did not identify any new information that would justify amendment of the likelihood, consequence or overall risk rankings. Accordingly, Auskelp considers the Project's environmental risks have been conservatively assessed and are capable of being effectively managed through the management framework proposed for the Project.

5.13.21 Item 21 – Management, Mitigation and Monitoring

The Department noted that the EIS presents management, mitigation and monitoring measures in different forms across the document — in some sections as a consolidated list at the end of a chapter, and in others within the body of the text — and that the consolidated table at Section 10.2 may not capture every measure discussed across the EIS and technical reports. The Department further noted that the table specifies three-yearly fish-assemblage and benthic monitoring at greater than 50% of farm operations, the basis for which was unclear given that the first stage of the development is 25 ha. The Department recommended that a consolidated list of all management, mitigation and monitoring measures be provided, with a clear commitment to implement all measures during construction and operation, and that monitoring of key performance indicators be aligned with the first stage of development to demonstrate a precautionary, evidence-based approach to progressive expansion.

RESPONSE

The EIS provides a consolidated management, mitigation and monitoring framework in EIS Table 19 (Section 10.2), specifically prepared for this purpose (reproduced in full and unmodified as Table 21 of this SRR). The table consolidates all commitments that form part of the Project. Narrative discussion contained elsewhere in the EIS provides assessment rationale and explanatory material, but does not constitute a separate management commitment unless carried through into Table 21, or the management plans committed for departmental approval under measure MP1. Auskelp considers that these commitments are correct as exhibited, are self-explanatory, and are appropriate and proportionate to the risk pathways identified in the EIS (and further confirmed in this SRR).

Table 21 is reproduced unmodified from the EIS and therefore retains the original Appendix B-series plan references. Following agency feedback, five of these management plans have been updated and are provided with this Submissions Response Report as Appendices RC1–RC5 (Marine Fauna Interaction Plan, Emergency Response Plan, Biosecurity Plan, Environmental Management Plan and Cultural Heritage Response Plan respectively). The commitment under measure MP1 applies to these updated plans.

Auskelp supports a precautionary monitoring framework; however, management and monitoring commitments should remain proportionate to the risk ratings and pathways identified by the EIS. Monitoring requirements that have no demonstrable benefit against the risk profiles (and associated mitigation measures) can unduly impose operational and financial burden without improving environmental outcomes.

Auskelp commits to implementing all of the measures recorded in Table 21 throughout the construction, deployment and operational phases of the Project. The applicable management plans related to construction, deployment, operation, maintenance, harvesting, biosecurity, and decommissioning of the Project are also on exhibition and available for review by the appropriate agencies. The Project will also remain subject to aquaculture lease and permit conditions administered by DPIRD Fisheries. DPIRD Fisheries and other relevant agencies continue to provide regulatory oversight and are the relevant authorities for ongoing operational oversight, reporting and compliance (as detailed in the respective management documents).

See Table 21 – Consolidated Mitigation Measures, as Section 5.13.21a below.

Fish-assemblage and benthic monitoring trigger

The Department queried the trigger for the three-yearly fish-assemblage and benthic monitoring. The three-year trigger would commence when more than 50 x 1-hectare rigs have been deployed. The threshold is deliberate: at a lower deployment any Project-related indicators are unlikely to be discernible relative to seasonal variability in a high energy ocean environment. Fish-assemblage and benthic monitoring changes will be reported to DPIRD Fisheries against the baseline established in EIS Appendix A9 (Elgin Benthic Survey, Fish Assemblages and Seafloor Mapping 2025).

Outcome

A consolidated management, mitigation and monitoring framework is provided in EIS Table 19 (Section 10.2), reproduced in full and unmodified as Table 21 of this SRR, which captures all measures Auskelp commits to implement during construction and operation. The basis for the three-yearly fish-assemblage and benthic monitoring trigger has been clarified: baseline monitoring is complete (EIS Appendix A9), therefore applies from the first stage, with the intensive three-yearly program triggered once more than 50 of the 100 one-hectare rigs are deployed — the scale at which a farm-wide effect becomes detectable above natural variability.

5.13.21a Item 21 – Consolidated Mitigation Measures

Table 21 Eden-1 Kelp Aquaculture Farm Consolidated Mitigation Measures

Consolidated Mitigation Measures		Detailed in EIS
Community Engagement - Ongoing		
CE1	■ **Transparency (CE1):** Annual Project Reporting published on website and emailed to Interested parties (includes marine fauna interactions)	6.8 Future Engagement
CE2	■ **Aboriginal Engagement (CE2):** Continue annual RAP engagement program; cultural awareness training; targeted employment and participation.	
CE3	■ **Assurance (CE3):** Third-party environmental audits every 3 years (fish assemblages and benthic habitat); publish findings and if required, corrective actions.	
CE4	■ **Education (CE4):** Training pathways with schools/TAFE; local procurement priority; internships and site visits, reviewed annually.	
CE5	■ **Complaints & Appeals (CE5):** Response email within 10-days to complainant; all complaints published annually on (de-identified) register; escalation pathway to NSW Fisheries if critical.	
Infrastructure – During Construction and Ongoing		
IN1	■ Visual Amenity: lease area located minimum 1.1km offshore ■ Maximum lease area 200 ha = 5% of Disaster Bay ■ No pile driving, underwater hammering or dredging ■ Infrastructure will only be located over unvegetated sandy substrate ■ Design features that minimise visibility from shoreline e.g. primarily dark coloured materials (floats), low profile and sub surface longline infrastructure as per Monitoring and Maintenance Plan ■ Conduct regular debris inspections annually and after storm events as per infrastructure integrity assessments in Monitoring and Maintenance Plan, Waste Management Plan and Environmental Management Plan ■ That waste materials and obsolete infrastructure (e.g., ropes and buoys), are classified and disposed of in accordance with the NSW Waste Classification Guidelines ■ Buoys and corner markers, will be labelled with the lease designation ■ Use International Association of Marine Aids (IALA) approved corner markers	9.1 Site Selection 9.2 Construction and Infrastructure 9.3 Impact On Community 9.4 Environment 10.0 Environmental Management

Consolidated Mitigation Measures (continued)		Detailed in EIS
Access and Facilities - Ongoing		
AF1	■ No truck access via Wonboyn ■ Only people (foot traffic) access allowed between designated Nadgee Nature Reserve roads and beach areas.	9.2.1 Noise During Construction 9.3.2 Marine Vessel and Vehicular Transport
Navigation - Ongoing		
NA1	■ Recreational fishers allowed in lease area ■ Commercial fishing not allowed within lease area (confirmed by NSW Fisheries) ■ Visibility of infrastructure (to other marine users) is the highest priority – ranks above visual amenity from shore (see reference: IN1) ■ Four flashing navigational markers will delineate the lease area in accordance with regulatory requirements ■ Aquaculture Lease Security Arrangement (Bond) with NSW DPIRD Fisheries as per Class 2 Aquaculture Licence	9.2.4 Navigation and Interactions with Other Waterway Users 9.3 Impact On Community
Heritage - Ongoing		
HE1	■ Comply with mitigation measures detailed in Cultural Heritage Response Plan ■ For all heritage discoveries contact Heritage NSW within 24 hours, and for Aboriginal objects contact the NSW Department of Planning and Environment – Aboriginal Cultural Heritage Division within 24 hours ■ Appropriate cultural protocols will be followed, including consultation on artefact handling, avoidance measures, or repatriation ■ Targeted employment and participation for First Nations, included with cultural awareness training	9.3.3 Aboriginal, European and Environmental Heritage Appendix A5: Aboriginal Cultural Heritage Report Appendix B2: Cultural Heritage Response Plan
Management Plans		
MP1	■ Obtain departmental approval for the following management plans prior to Project construction, as follows: ○ Appendix B1: Marine Fauna Interaction Plan ○ Appendix B2: Cultural Heritage Response Plan ○ Appendix B3: Emergency Response Plan ○ Appendix B4: Traffic Management Plan ○ Appendix B5: Seaweed Aquaculture Biosecurity Plan ○ Appendix B6: Monitoring and Maintenance Plan ○ Appendix B7: Environmental Management Plan ○ Appendix B8: Waste Management Plan ○ Appendix B9: Construction Deployment Management Plan ○ Appendix B10 Decommissioning Management Plan	List of draft Management Plans are attached as EIS Appendix B: Mitigation Plans and Measures

Consolidated Mitigation Measures (continued)		Detailed in EIS
Economic - Ongoing		
EC1	■ Goods and services will be obtained locally where possible – internal	9.3.6 Social and Economic
Nadgee Nature Reserve - Ongoing		
NNR1	■ No drone usage within or over Nadgee Nature Reserve ■ Drone take-off points [only] below high-water mark and not within 1 km of the south end of Greenglades Beach. Where possible, a spotter should be used to ensure no interactions with local raptors	9.3.2 Marine Vessel and Vehicular Transport 9.4.8 Areas of Conservation Significance
Biodiversity - Ongoing		
BI1	■ Comply with approved Marine Fauna Interaction Management Plan (MFIMP) ■ Comply with NSW Department of Primary Industries (DPI) Aquaculture Management Guidelines and National Light Pollution Guidelines for Wildlife ■ Annual review of threatened species register ■ Seedstock derived only from wild Disaster Bay *Ecklonia radiata* (within NSW local area) with wild sori collection repeated annually to maintain genetic variation ■ Maintain minimum whale approach distances as per NSW DPI regulations ■ Notification of injured wildlife to NSW National Parks and Wildlife Services (NPWS) and NSW Fisheries as per MFIMP ■ Monitor ecological conditions (mammal interaction, entanglement, water quality, fish abundance, benthic condition) and report any unusual findings to NSW Fisheries within 7 days as per MFIMP ■ Annual reporting of significant beach-cast deposits of *Ecklonia radiata* to NSW Fisheries	9.4 Environment 10.1 Environmental Management Plan
Reporting to NSW DPIRD Fisheries – Ongoing (see codes below)		
RE1 RE2 RE3	■ 3-year fish assemblage BRUV testing - >50% farm operations ■ 3-year benthic survey testing - >50% farm operations ■ Annual reporting of excess beach cast deposits of *Ecklonia radiata* on Greenglades beach related to farming operations	9.4.1 Marine Habitat, Water Quality and Sedimentation 9.1.2 Habitat Loss and Shading 4.9 Beach-cast Kelp

Consolidated Mitigation Measures (continued)		Detailed in EIS
Other Actions – Ongoing (see codes below)		
AC1 AC2	Comply with the Australian Aquaculture Code of Conduct Annual consultation with commercial fishers	9.2.4 Navigation and Interactions with Other Waterway Users 6.8 Future Engagement

5.13.22 Correction – EIS Reference List and Citation Accuracy

On 15 June 2026, DPHI made a request for further information regarding ten citation inaccuracies found within the 243 citations listed in the EIS. Requests for PDFs to these documents is requested.

RESPONSE

Auskelp confirms there was corruption in the reference list of the EIS (Section 13, Bibliography). As detailed, a number of entries had been recorded with incorrect bibliographic details during compilation: several genuine, peer-reviewed sources were listed more than once under varying titles, journals or author details; one engineering citation (Bui, Bakhtyar & Samali 2023) could not be verified as a genuine publication and is withdrawn; and one trade-publication citation (Buschmann et al. 2008) is being verified against the original. Auskelp regrets these errors, has corrected them below, and sets out both the corrected references and an assessment of whether the errors have any bearing on the findings of the EIS.

The corrected citations relevant are provided below (hyperlinks included):

Buschmann, A.H., Camus, C., Infante, J., Neori, A., Israel, Á., Hernández-González, M.C., Pereda, S.V., Gómez-Pinchetti, J.L., Golberg, A., Tadmor-Shalev, N. & Critchley, A.T. (2017). Seaweed production: overview of the global state of exploitation, farming and emerging research activity. European Journal of Phycology, 52(4), 391–406. https://doi.org/10.1080/09670262.2017.1365175

Campbell, I., Macleod, A., Sahlmann, C., Neves, L., Funderud, J., Øverland, M., Hughes, A.D. & Stanley, M. (2019). The environmental risks associated with the development of seaweed farming in Europe – prioritizing key knowledge gaps. *Frontiers in Marine Science*, 6, 107. https://doi.org/10.3389/fmars.2019.00107

Carranza, D.M., Wieters, E.A., Vásquez, J.A. & Stotz, W.B. (2024). Exploring the consequences of kelp removal: a review shows we are missing a broader perspective. *Biodiversity and Conservation*, 33, 401–437. https://doi.org/10.1007/s10531-023-02769-7

Feng, D., Meng, A., Wang, P., Yao, Y. & Gui, F. (2021). Effect of design configuration on structural response of longline aquaculture in waves. *Applied Ocean Research*, 107, 102489. https://doi.org/10.1016/j.apor.2020.102489

Effect on the assessment and risk ratings

Auskelp has reviewed each affected citation and confirms that the errors are bibliographic and do not alter any finding or risk rating. The affected citations were used to corroborate general, established propositions, each of which is independently supported by the corrected sources and by the Project's own site-specific testing evidence, as follows.

The propositions that native kelp cultivation presents low disease and biosecurity risk, and that kelp provides nutrient-removal and habitat benefits (EIS Sections 9.4.1, 9.4.2), were supported in part by Campbell et al. (2019) and Buschmann et al. (2017). Both are genuine papers that support those propositions, and the corrected citations carry the same meaning. These propositions are, in any event, primarily founded on the biology of the cultivated species, the absence of feed, chemical or nutrient inputs, the regulatory position

that no macroalgal disease is nationally reportable, and the zero disease and pest detections recorded across Auskelp's multi-year testing program — none of which depends on the affected references.

The proposition that benthic systems show ecological resilience and recovery in association with kelp cultivation and removal (EIS Section 9.1.2) was supported by Carranza et al. (2024). That paper is genuine, the digital object identifier was correct, and the corrected citation supports the same proposition.

The proposition that longline infrastructure aligned with the predominant wave and current direction experiences reduced structural loading (EIS Sections 9.1.1 and 9.2.3) remains confirmed by the longline hydrodynamics peer-reviewed sources below, and by the Project's own performance of the test infrastructure in Disaster Bay, which remained deployed and structurally intact through five major storm events with individual wave heights to 13.0 metres over the 2024–2026 testing program.

Peer-reviewed sources supporting the orientation and loading proposition:

Feng, D., Meng, A., Wang, P., Yao, Y. & Gui, F. (2021). Effect of design configuration on structural response of longline aquaculture in waves. *Applied Ocean Research*, 107, 102489. https://doi.org/10.1016/j.apor.2020.102489 — experimentally and numerically examines how structure orientation relative to incident waves affects mooring-line tension and main-line loading, directly supporting the orientation and loading proposition.

Mascorda Cabre, L., Hosegood, P., Attrill, M.J., Bridger, D. & Sheehan, E.V. (2021). Offshore longline mussel farms: a review of oceanographic and ecological interactions to inform future research needs, policy and management. *Reviews in Aquaculture*, 13(4), 1864–1887. https://doi.org/10.1111/raq.12549 — a peer-reviewed review setting out the design principle that longline headlines aligned with the prevailing current direction minimise drag and structural loading.

Assessment outcome

The four risk ratings examined — structural integrity and stability (EIS 9.2.3), genetics disease an introduced pasts [biosecurity] (EIS 9.4.2), entanglement and ingestion of marine debris (EIS 9.4.4) and vessel strike and acoustic pollution (EIS 9.4.5) — are unaffected. Each of those ratings rests primarily on the design characteristics of the system and Auskelp's empirical testing record, with the published literature serving a corroborative rather than determinative role. The corrected literature supports the same conclusions, and no rating relied upon a source that has been withdrawn as its sole or principal support.

5.13.23 Correction — EIS Reference List and Citation Accuracy

On 15 June 2026, DPHI identified two further citation inaccuracies within the EIS (Section 13, Bibliography). Auskelp has reviewed both and responds below. In each case, Auskelp has identified the genuine, peer-reviewed source that underlies the proposition the citation was supporting, and confirms that the substantive findings of the EIS are not only unaffected but are directly supported by that genuine source.

RESPONSE

Auskelp confirms that both entries were affected by the reference-list title corruption identified in the preceding section, in which bibliographic details were degraded during compilation. Importantly, in both cases the corruption affected the *recording of the citation*, not the existence or validity of the underlying scientific paper — and the propositions the EIS drew from these sources are genuine, peer-reviewed, and directly on point, as set out below:

McGovern et al. (2025). The entry was recorded with incorrect author, title and publication details (as "McGovern, Ride & Harrison (2025), *Whale Migration Patterns in Far South Coast NSW … CSIRO Marine Research Series*"), and that erroneous entry is withdrawn. The genuine source is identified as:

McGovern, B., Machernis, A.F., McCordic, J.A., Olson, G.L., Sullivan, F.A., Barber-Meyer, S.M., Currie, J.J. & Stack, S.H. (2025). Prevalence, Composition, and Behaviour of Humpback Whale (*Megaptera novaeangliae*) Groups Containing Multiple Mother–Calf Pairs in East Australia. *Aquatic Mammals*, 51(2), 163–177. https://doi.org/10.1578/AM.51.2.2025.163

Visch et al. (2020). The entry was recorded with an incorrect title, co-authors and journal placement (as "Visch, Wernberg & Coleman (2020), *Realising ecological sustainable kelp aquaculture in southern Australia*, Marine Policy 119, 104037"), and that entry is withdrawn. The genuine, peer-reviewed work by the same lead author is as follows:

Visch, W., Layton, C., Hurd, C.L., et al. (2023). A strategic review and research roadmap for offshore seaweed aquaculture – a case study from southern Australia. *Reviews in Aquaculture*, 15(4). https://doi.org/10.1111/raq.12788

Effect on the assessment and risk ratings

The proposition that Twofold Bay, approximately 25 km north of Disaster Bay, experiences regular and concentrated migrating-whale presence relative to Disaster Bay (EIS Section 9.4, informing the entanglement assessment at 9.4.4 and the vessel-strike assessment at 9.4.5) is directly supported by the genuine McGovern et al. (2025) study, in which Twofold Bay/Eden is a formal multi-year survey site yielding 541 humpback whale group encounters over six survey years, characterised as an area of concentrated migratory presence and opportunistic feeding on the southern migration. This is further supported by the documented opportunistic feeding of humpback whales off Eden (referenced in the document as Stamation et al., 2007; Pirotta et al., 2021) and by the area's position on the recognised eastern Australian humpback migration corridor (IUCN-MMPATF, 2021; DCCEEW). Materially, none of these citations — including the McGovern et al. (2025) — identifies Disaster Bay as an area of whale aggregation, feeding, resting or calving. That absence is consistent with, and directly supportive of, the EIS finding that whale presence within the lease area is transitory and of lower density than at Twofold Bay. Importantly, the entanglement ratings rest primarily on the design characteristics of the system, the migration-window operating controls, and Auskelp's multi-year site observation record (no whale entanglements and only limited, benign fauna interactions recorded over more than two years of deployment in Disaster Bay).

The proposition that kelp aquaculture in southern Australia can be undertaken with limited benthic and environmental impact (EIS Sections 9.1.2 and 9.4.1) is supported by the genuine, peer-reviewed work of authors identified above, including a BACI-designed field study of the environmental impact of kelp aquaculture (Visch et al., 2020, *Marine Pollution Bulletin*) and a strategic review of offshore seaweed aquaculture using southern Australian species as case studies (Visch et al., 2023, *Reviews in Aquaculture*). The corrected references carry the same meaning, and the proposition is in any event primarily founded on the Project's own benthic survey baseline and the design of the system (mobile sandy substrate, screw anchors, no dredging or seabed modification).

Assessment outcome

The risk ratings examined — entanglement and ingestion of marine debris (EIS 9.4.4), vessel strike and acoustic pollution (EIS 9.4.5), and marine habitat and benthic condition (EIS 9.1.2, 9.4.1) — are unaffected. Each rests primarily on the design characteristics of the system, the site-specific survey and operating controls, and Auskelp's monitoring record. The corrected sources above now identified support the same conclusions.

5.13.24 Complete EIS Reference List

To address any additional citation inaccuracies, a complete replacement reference list for EIS Auskelp Eden-1 Kelp Aquaculture Farm v9.4 is attached as Appendix RB7 Eden-1 EIS Consolidated Reference List (Updated 7 July 2026). This consolidated list supersedes and replaces in its entirety the reference list at Section 13 (Bibliography) of the Environmental Impact Statement (v9.4, dated 13 March 2026). It corrects the affected bibliographic entries, consolidates records that had been duplicated under varying titles or details during compilation, withdraws the citations that could not be verified, and incorporates the corrected and additional peer-reviewed sources identified in Items 5.13.22 and 5.13.23. The reference list has been reviewed in full for this purpose, and Appendix RB7 should be read as the definitive bibliography for the EIS (v9.4) and this Submissions Response Report.

Auskelp has reviewed each affected citation and confirms that the errors are bibliographic and do not alter any finding, conclusion or risk rating of the EIS. The affected citations were used to corroborate general, well-established propositions, each of which is independently supported by the corrected sources identified in

Appendix RB7 and, more fundamentally, by the Project's own site-specific evidence In no case did a finding or risk rating depend on an affected or withdrawn citation as its sole or principal support. Accordingly, the citation corrections have no material effect on the assessment, and the findings and risk ratings of the EIS (v9.4) are confirmed as unchanged.

5.14 DPIRD – Food Authority and Biosecurity (supplementary)

Agency role

The Department of Primary Industries and Regional Development (DPIRD) is the NSW Government agency responsible for the administration of fisheries, aquaculture, aquatic biosecurity, marine pest management and food safety regulation. DPIRD's interests in respect of the Project include the assessment and administration of aquaculture leases and permits under the Fisheries Management Act 1994, management of aquatic biosecurity risks under the Biosecurity Act 2015, protection of aquatic ecosystems, management of introduced marine pests and aquatic disease risks, and food safety matters associated with the cultivation and processing of seaweed products.

Summary of advice received

Item	Detail
Date of advice	16 June 2026
Reference	DPIRD Aquatic Biosecurity and Food Authority Advice
Signatory	Wendy Goodburn, Agricultural Land Use Planner – Primary Industries, DPIRD
Description	Review of EIS, Biosecurity Plan and supporting documentation for SSD-41680467
Summary	Additional comments relating to aquatic biosecurity, hatchery operations, disease risk assessment, introduced marine pests, monitoring, reporting and emergency response procedures
Status	Addressed through revised Biosecurity Plan and supporting documentation

Matters raised by DPIRD

DPIRD Aquatic Biosecurity provided supplementary comments regarding hatchery biosecurity, disease and pathogen assessment, introduced marine pests, seedstock health verification, monitoring and surveillance procedures, reporting obligations, emergency response arrangements and compliance with the Biosecurity Act 2015.

RESPONSE

Auskelp acknowledges the additional advice provided by DPIRD Aquatic Biosecurity regarding biosecurity risk assessment, disease and pathogen management, introduced marine pests, hatchery controls, monitoring, reporting and emergency response arrangements.

The supplementary advice from DPIRD Aquatic Biosecurity was received more than halfway through the response period, by which time much of the work in the areas it addresses — the revised Biosecurity Plan, the Biosecurity Risk Assessment and the associated management framework — had already been substantially completed in response to the earlier advice of DPIRD Fisheries and DCCEEW. Given the timing, and the item-by-item structure of the response table below, it has (in many cases) been necessary to answer each question by referring back to where the matter had already been addressed, whether in the exhibited EIS or elsewhere in this Submissions Response Report. This has unavoidably produced a more complex and cross-referential response chapter than would otherwise have been the case. The cross-references are provided to assist the reader in locating the relevant material, and should not be taken to indicate any duplication or gap in the underlying assessment.

Therefore, in response to this advice and combined with previous advice from DPIRD Fisheries and DCCEEW, Auskelp has undertaken a further review and update of the Project's biosecurity framework. While the exhibited EIS included a Biosecurity Plan and associated management plans, the agencies identified opportunities to provide greater detail, improve transparency, strengthen monitoring and response procedures, and consolidate operational biosecurity requirements. As a result, the biosecurity framework has been revised and expanded to collectively address hatchery operations, offshore cultivation, disease and pathogen risk assessment, introduced marine pests, monitoring and surveillance requirements, incident response procedures, regulatory notification obligations, adaptive management triggers and ongoing compliance with the Biosecurity Act 2015.

Table 22 Revised Biosecurity Framework Documents and Contents

Document	Purpose	Key Contents
Biosecurity Plan (revised) **Appendix RC3**	Primary biosecurity management document for the Project.	General Biosecurity obligations; Biosecurity Act 2015 requirements; hatchery biosecurity framework; seedstock collection and health verification procedures; disease and pathogen management; introduced marine pest management; vessel, equipment and personnel controls; hatchery-to-farm transfer protocols; monitoring and reporting requirements; emergency response procedures; regulatory notification pathways; Biosecurity Contact Directory; integration with supporting biosecurity documents.
Document	Purpose	Key Contents
Biosecurity Risk Assessment (new) **Appendix RB2**	Primary biosecurity risk assessment for the Project.	Hazard identification; pathway × receptor analysis; consequence assessment; likelihood assessment; risk ratings; management measures; introduced marine pest assessment; disease and pathogen assessment; hatchery contamination pathways; vessel and equipment transfer pathways; genetic integrity assessment; operational biosecurity risks; decommissioning risks.
Biosecurity Management Table (new) **within Appendix RC3**	Consolidated management schedule located as BM1 in Biosecurity Plan.	Biosecurity hazard register; management measures; preventative controls; operational controls; monitoring requirements; inspection requirements; reporting obligations; responsibilities; management actions; compliance requirements.
Biosecurity Control Table (new) **Within Appendix RC3**	Detailed operational control and response framework as BC1 in Biosecurity Plan.	Hazard-specific controls; introduced marine pest response actions; disease response procedures; hatchery contamination controls; equipment and vessel controls; corrective actions; notification requirements; escalation procedures; incident management actions etc.
Environmental Management Plan (Revised) **Appendix RC4**	Environmental implementation framework.	Integration of biosecurity controls; environmental monitoring requirements; reporting obligations; environmental incident management; compliance framework.
Emergency Response Plan (Revised) **Appendix RC2**	Emergency and incident response framework.	Biosecurity incident response procedures; emergency contacts; notification pathways; regulatory reporting requirements; response responsibilities; recovery actions.
Cultural Heritage Response Plan **Appendix RC5**	Cultural Heritage response, Aboriginal and European	New Unexpected Finds flowchart added.

Together, these documents provide a comprehensive and integrated biosecurity management framework that expands upon the material available during exhibition and directly addresses the matters raised by DPIRD Fisheries, DPIRD Aquatic Biosecurity and DCCEEW. The revised framework incorporates specific consideration of known introduced marine pests, disease and pathogen pathways, hatchery contamination risks, stock-health verification procedures, vessel and equipment controls, monitoring and surveillance requirements, emergency-response protocols, regulatory notification obligations and adaptive-management triggers.

Copies of the revised biosecurity documents are provided in the appendices to this Submissions Response Report as detailed in Table 22 and should be read together as the complete biosecurity management framework for the Eden-1 Kelp Aquaculture Project.

Preparation and Revision of Management Plans

Auskelp notes that the primary purpose of the Environmental Impact Statement is to assess the potential impacts of the Project, identify appropriate mitigation measures, and demonstrate that those impacts can be effectively managed. While management frameworks are commonly described during the assessment phase, detailed operational management plans are often further developed, reviewed and approved through subsequent agency consultation and conditions of consent.

Notwithstanding this, Auskelp elected to prepare and publicly exhibit a comprehensive suite of draft management plans as part of the EIS documentation. These plans were provided to support transparency, assist agency review, and demonstrate the proposed management framework that would be implemented should the Project proceed. The exhibited management plans were identified as DRAFT documents and it was anticipated that they would continue to evolve through the assessment process in response to advice received from DPHI, DPIRD Fisheries, DCCEEW, Transport for NSW, Heritage NSW and other relevant agencies. This approach is consistent with the adaptive and iterative nature of the SSD assessment process.

Since exhibition, substantial effort has been undertaken to review, revise and expand the management framework in response to agency advice. In particular, the Project's biosecurity framework has been expanded through the preparation of a revised standalone Biosecurity Plan, a dedicated Biosecurity Risk Assessment, Biosecurity Management Table, Biosecurity Control Table, Biosecurity Monitoring, Triggers and Responses Framework, together with associated amendments to the Environmental Management Plan, Monitoring and Maintenance Plan and Emergency Response Plan.

Accordingly, Auskelp considers that the management framework presented with the EIS exceeded the level of detail typically required at exhibition stage and has subsequently been further updated through the Submissions Response Report process and ongoing consultation with regulatory agencies.

Biosecurity context

Biosecurity risk is not uniform across aquaculture, and it is important that the Project's risk profile is understood in its proper context. The most significant marine biosecurity risks arise from activities that this Project does not undertake. Finfish farming introduces feed, antibiotics and concentrated waste, and is associated with well-documented viral, bacterial and parasitic disease transfer to wild fish stocks. Bivalve aquaculture — oysters and mussels — actively filters and bioaccumulates waterborne pathogens and has been a repeated vector for parasite co-introduction and spillover to native species. The translocation of live animals, stock and equipment across bioregions, and the ballast water and hull biofouling of commercial and international shipping, remain the dominant pathways for introduced marine pests worldwide.

Against these vectors, the cultivation of a native seaweed sits at the lowest end of the spectrum: *Ecklonia radiata* is autotrophic and does not feed, filter, bioaccumulate pathogens or produce faecal waste; it is grown from locally sourced native stock with no bioregional translocation; and it requires no antibiotics, hormones or chemical inputs, removing the principal vectors for disease proliferation and antimicrobial resistance that drive risk in animal aquaculture. The Project does not introduce a novel biosecurity vector to Disaster Bay; it operates within a marine environment already subject to far greater biosecurity pressures from existing shipping and other established uses. Kept in perspective, the residual biosecurity risk of native kelp cultivation is low both in absolute terms and, more tellingly, relative to every other significant marine biosecurity pathway operating in the region.

Response to Agency advice

1. Hatchery location and Twofold Bay biosecurity risks

DPIRD requested additional consideration of biosecurity risks associated with hatchery operations in proximity to maritime traffic within Twofold Bay, including known introduced marine pests and potential pathogen pathways.

Response

The revised Biosecurity Plan (Appendix RC3) and Biosecurity Risk Assessment (Appendix RB2) specifically consider vessel-mediated pest pathways, hatchery water treatment and filtration systems, introduced marine pests known from the Twofold Bay region, and measures to prevent transfer of pests or pathogens between the hatchery and offshore cultivation operations.

These matters were also addressed in the exhibited EIS and elsewhere in this Submissions Response Report, as set out below:

- **Hatchery water intake, treatment and containment** — the hatchery operates as a closed, recirculating, filtered and sterilised seawater system, as described in EIS Section 9.4.2 (Genetics, Disease and Introduced Pests) and the updated Biosecurity Plan (Appendix RC3). This closed-intake design is the primary control against water-borne pest and pathogen transfer from the surrounding Twofold Bay environment.
- **Introduced marine pests and pathogen pathways** are assessed on a pathway × receptor basis in the Biosecurity Risk Assessment (Appendix RB2), covering vessel biofouling, hatchery water intake, equipment movement, stock transfer, disease transmission and pathogen amplification pathways. These pathways, and the plausible ecological consequences should they occur, are also addressed in the response to DCCEEW at Section 5.12 of this report (Items 1 and 2), which draws on the same Appendix RB2.

Accordingly, the biosecurity risks associated with the hatchery's location within the Twofold Bay bioregion — including proximity to maritime traffic, known introduced marine pests and potential pathogen pathways — have been assessed and are managed through the revised biosecurity framework (Appendix RC3 and Appendix RB2), and in the response to DCCEEW at Section 5.12, consistent with the material presented in the EIS.

2. Asparagopsis cultivation

DPIRD noted that the Scoping Report referred to both *Ecklonia radiata* and *Asparagopsis spp.*, whereas the EIS only proposes cultivation of Ecklonia radiata.

Response

Noted. SSD-41680467 relates solely to the cultivation of *Ecklonia radiata*. *Asparagopsis spp.* does not form part of the current application. Any future proposal involving another seaweed species would require separate assessment and consideration of species-specific biosecurity risks.

3. Disease identification, monitoring and response procedures

DPIRD requested additional information regarding disease indicators, monitoring procedures, record keeping, reporting obligations and incident-response arrangements.

Response

Revised Biosecurity Plan includes monitoring requirements, trigger levels, inspection procedures, reporting pathways, emergency response procedures, contact directories and corrective-action requirements. These measures are supported by the Biosecurity Monitoring, Triggers and Responses Framework, Emergency Response Plan Appendix RC2 and Monitoring and Maintenance Plan EIS Appendix B6.

4. Biosecurity Act obligations

DPIRD requested clearer demonstration of awareness of obligations under the Biosecurity Act 2015, including General Biosecurity Duty responsibilities and prohibited matter reporting requirements.

Response

Accepted. Auskelp is aware of, and commits to discharging, its obligations under the Biosecurity Act 2015 (NSW), including the General Biosecurity Duty (sections 22–23) to take reasonable and practical measures to prevent, eliminate or minimise biosecurity risks, and the duty to report prohibited and notifiable matter. The revised Biosecurity Plan (Appendix RC3) includes dedicated sections addressing General Biosecurity Duty obligations, prohibited and notifiable matter response protocols, reporting requirements and regulatory notification pathways, supported by the Biosecurity Contact Directory and the Emergency Animal Disease Hotline (1800 675 888). These obligations are also recognised in the exhibited EIS at Section 5.3.19 (Biosecurity Act 2015 (NSW)) and the statutory framework table at EIS Section 5.0 (addressed at EIS Section 9.4.2), and their operational implementation is reflected in the notification triggers in Appendix HAZ1 of the Biosecurity Plan found in the Appendix RC3 Biosecurity Plan.

These matters were also addressed in the exhibited EIS and elsewhere in this Submissions Response Report, as set out below:

- **Disease indicators and identification** are described in EIS Section 9.4.2 (Genetics, Disease and Introduced Pests), which sets out the visual health screening criteria applied to each sorus, gametophyte and sporophyte (including epiphytic overgrowth, fungal lesions, bleaching and abnormal morphology). These are further developed in the revised Biosecurity Plan (Appendix RC3) and the disease and pathogen assessment in the Biosecurity Risk Assessment (Appendix RB2).
- **Monitoring procedures** are set out in EIS Section 9.4.2 and the exhibited Monitoring and Maintenance Plan (EIS Appendix B6), and are expanded in the revised Biosecurity Plan (Appendix RC3), including the Biosecurity Management Table (BM1), together with the Environmental Performance Indicators and Decision Triggers in Appendix RC3 Biosecurity Plan.
- **Record keeping** is addressed through the batch traceability system described in EIS Section 9.4.2 (parent tissue source, collection date and deployment location) and the record-keeping obligations noted in EIS Section 5.3.19 (Biosecurity Act 2015 (NSW)), and is consolidated in the revised Biosecurity Plan (Appendix RC3).
- **Reporting obligations** are described in EIS Section 5.3.19 (including disease reporting and immediate notification of unusual mortality or notifiable disease events) and the Monitoring and Maintenance Plan (EIS Appendix B6), and are expanded in the revised Biosecurity Plan (Appendix RC3) and Environmental Management Plan (Appendix RC4).
- **Incident-response arrangements** are set out in the exhibited Emergency Response Plan (EIS Appendix B3) and expanded in the revised Emergency Response Plan (Appendix RC2) and the Biosecurity Control Table (BC1) within the Biosecurity Plan (Appendix RC3), covering disease response procedures, corrective actions, escalation and notification pathways (including the Emergency Animal Disease Hotline).

The monitoring, reporting and incident-response framework was also addressed in the response to DCCEEW at Section 5.12 of this report (Item 5 – Monitoring and Adaptive Management), which confirms defined monitoring indicators, disease and mortality monitoring, trigger thresholds, incident reporting procedures, corrective-action requirements and adaptive-management processes, drawing on Appendix RC3 and Appendix RB2.

5. Adequacy of biosecurity assessment

DPIRD questioned whether biosecurity risks had been adequately considered based on the documentation available during exhibition.

Response

Since exhibition, the biosecurity framework has been expanded through the revised Appendix RC3 Biosecurity Plan (which now includes a Biosecurity Management Table (BM1) and Biosecurity Control Table (BC1)) and supporting management plans. These documents provide assessment of disease, pest, genetic and operational biosecurity risks together with monitoring, response and adaptive-management measures.

The resulting biosecurity framework is comprehensive relative to the Project's assessed risk profile. The Project's biosecurity risks are assessed as low — likelihood Rare and consequence Negligible — due to the adopted controls, monitoring and management measures under the adopted risk framework.

The adequacy and proportionality of the biosecurity assessment are demonstrated across the exhibited EIS and elsewhere in this Submissions Response Report, as follows:

- The revised biosecurity suite is described in the introductory narrative to this Section 5.14 and consolidated in Table 22 (Revised Biosecurity Framework Documents), comprising the Biosecurity Plan (Appendix RC3, incorporating BM1 and BC1), the Biosecurity Risk Assessment (Appendix RB2), the Knowledge Gaps and Uncertainty Register (Appendix RB3), the revised Emergency Response Plan (Appendix RC2) and the revised Environmental Management Plan (Appendix RC4).

- The consolidated biosecurity risk rating is recorded at Section 5.13.20.2 (Biosecurity – genetics, disease and introduced pests), which assesses likelihood as Rare and consequence as Negligible, when adopting the Biosecurity Plan, Biosecurity Risk Assessment, Environmental Management Plan and Emergency Response Plan.
- The response to DCCEEW at Section 5.12 (Items 1 to 6) sets out the precautionary, pathway-based assessment of ecological consequences, spread pathways, monitoring and adaptive management, and residual risk and uncertainty, supported by Appendix RB2 and Appendix RB3, and concludes that residual risks remain low following implementation of controls.
- The precise biosecurity risk profile — including the express recognition that the Project does not carry zero biosecurity risk — is set out in the Biosecurity discussion within Section 4 (Response to Submissions) of this report.

Accordingly, biosecurity risks have been adequately, and indeed conservatively, considered: the expanded framework provides monitoring and management measures that are comprehensive relative to, and exceed the requirements of, the Project's low assessed biosecurity risk profile.

6. Hatchery biosecurity protocols

DPIRD noted that hatchery biosecurity procedures were not available for review and sought greater detail regarding hatchery management practices.

Response

Accepted. Additional hatchery biosecurity controls have been documented in the Biosecurity Plan Appendix RC3 and Biosecurity Risk Assessment RB2, including seedstock screening, quarantine procedures, water-treatment controls, hygiene requirements, propagation controls, batch separation and health-verification procedures prior to deployment.

7. Disease and pathogen assessment

DPIRD requested further consideration of known kelp pathogens and disease literature, including the possibility that disease occurrence in kelp may be under-reported.

Response

The revised Biosecurity Plan Appendix RC3 and Biosecurity Risk Assessment Appendix RB2 and supporting risk assessment incorporate additional scientific literature regarding kelp pathogens, viruses and phycopathology. The revised assessment recognises that published information remains limited and adopts a precautionary monitoring and adaptive-management approach.

8. Consultation with DPIRD Aquatic Biosecurity

DPIRD noted that Aquatic Biosecurity Programs were not directly consulted during preparation of the EIS.

Response

Noted. Auskelp acknowledges that direct consultation with DPIRD Aquatic Biosecurity did not occur during preparation of the exhibited EIS. Aquatic Biosecurity Programs were not identified among the agencies nominated for consultation in the Secretary's Environmental Assessment Requirements or in the Department's guidance on agencies to be consulted, and the Proponent was accordingly unaware that a separate consultation pathway existed. Auskelp welcomes the advice now received and has engaged with it fully, as reflected in the responses set out in this section.

9. Disease susceptibility statements

DPIRD advised that statements suggesting kelp is not susceptible to communicable diseases should be revised.

Response

Accepted. The revised documentation recognises that kelp, like all living organisms, may be susceptible to disease or pathogen interactions. As detailed in the EIS Section 9.4 the Project "must ensure the risk of

disease, parasites, or invasive biofouling species is minimised, and where such events occur, they are reported and managed promptly with appropriate remediation." The Project does not represent kelp aquaculture as carrying zero biosecurity risk; rather, the assessment recognises that disease is possible but of low residual risk, and applies a precautionary, adaptive-management approach consistent with the available scientific literature.

The residual risk for this Project is assessed as low because the principal driver of farm-to-wild transfer identified in the literature — the translocation of non-local stock — is absent. Seedstock is wild-collected within 10 kilometres of the lease, comprises only the native species *Ecklonia radiata*, and involves no translocation across bioregions, so no novel pathogen is introduced to the receiving environment. Any pathogen present in cultivated stock is one already circulating within the same local wild population from which the seedstock is drawn, rather than an introduced agent to which wild *Ecklonia radiata* is naïve.

This revised position is already set out in the exhibited EIS and elsewhere in this Submissions Response Report, as follows:

- The consolidated residual risk rating for biosecurity (genetics, disease and introduced pests) is recorded at Section 5.13.20.2 — that is, disease is possible but low risk — with matters cross-referenced to Section 5.12 and detailed in Appendix RB2, Appendix RC3 and Appendix RC2.
- The response to DCCEEW at Section 5.12 (Items 1 and 2) applies a precautionary, pathway-based framework that assesses disease and pathogen pathways and their plausible ecological consequences, concluding that residual risks remain low following implementation of controls (Appendix RB2).
- The revised Biosecurity Plan (Appendix RC3) addresses specific kelp diseases of biosecurity concern and notifiable and prohibited matter under the Biosecurity Act 2015 (NSW), and the disease and pathogen assessment is provided in the Biosecurity Risk Assessment (Appendix RB2).

The underlying EIS discussion of kelp disease susceptibility appears at EIS Section 4.8 and EIS Section 9.4.2 (Genetics, Disease and Introduced Pests). The revised position above qualifies the general statements in those sections by expressly recognising that disease occurrence is possible, though assessed as low residual risk, consistent with the current state of scientific knowledge and the response plans in place.

10. Local seedstock and biosecurity risk

DPIRD noted that use of local seedstock reduces but does not eliminate biosecurity risk.

Response: Accepted. The revised documentation clarifies that local seedstock substantially reduces genetic and translocation risks but does not eliminate all biosecurity risks. Additional screening, monitoring and hatchery controls have been incorporated to address residual risk pathways as detailed in Point 9, above.

11. SEARs disease and pest requirements

DPIRD considered that disease and pest management protocols required by the SEARs were not sufficiently documented.

Response

Accepted. The revised Biosecurity Plan, Biosecurity Risk Assessment, Biosecurity Management Table and Biosecurity Control Table provide detailed disease and pest management protocols covering hatchery operations, deployment, cultivation, maintenance, harvesting and waste handling.

Introduced-marine-pest risk in the locality does not arise from the Project itself, but from external commercial and international shipping operating within Twofold Bay and adjacent to Disaster Bay— including cargo, woodchip-export and other large-vessel traffic — which represents the recognised primary vector for marine pest introductions through ballast water and hull biofouling. This external shipping-related pathway, and its relevance to the hatchery water source and extraction point, is expressly identified and assessed in the revised Biosecurity Plan (Appendix RC3) and was incorporated in response to DPIRD Fisheries advice (refer DPIRD Fisheries response, Item 7 — Biosecurity Plan as a standalone document), with the associated hatchery water-intake pathway assessed in the Biosecurity Risk Assessment (Appendix RB2). The Project's own

operations, by contrast, use locally sourced native seedstock with no bioregional translocation, and are therefore a materially smaller contributor to introduced-pest risk than the pre-existing shipping activity in the Bay.

12. Introduced marine pests and biofouling management

DPIRD requested greater detail regarding introduced marine pests, biofouling management, surveillance and notification requirements.

Response

Accepted. The revised Biosecurity Plan (Appendix RC3) includes expanded introduced marine pest information, monitoring requirements, notification triggers, reporting obligations and vessel/equipment biofouling controls.

The surveillance and notification framework is set out concisely in Appendix RC3 Biosecurity Plan. The "Biosecurity — pests and disease" indicator specifies the monitored metric (detection of Prohibited or Notifiable Matter, or unexplained kelp mortality), the surveillance method and frequency, the trigger threshold (any Prohibited Matter detection, or kelp mortality exceeding 50% against a rolling monthly baseline), and the management response (isolate and notify under the Biosecurity Plan, contact the Emergency Animal Disease Hotline on 1800 675 888, and quarantine affected stock, with any detection pausing expansion until the cause is identified and cleared).

This is supported across the exhibited EIS and elsewhere in this report as follows:

- Detailed introduced marine pest response actions, biofouling controls, and notification, escalation and incident-management requirements are set out in the Biosecurity Control Table (BC1) within the Biosecurity Plan (Appendix RC3) and Appendix HAZ1 – Biosecurity Monitoring, Triggers and Responses, with the corresponding hazard register, monitoring, inspection and reporting obligations recorded in the Biosecurity Management Table (BM1).
- The introduced marine pest assessment and the vessel and equipment transfer (biofouling) pathways are assessed in the Biosecurity Risk Assessment (Appendix RB2).
- Introduced marine pest surveillance and biofouling monitoring are expressly listed within the monitoring framework confirmed in the response to DCCEEW at Section 5.12 (Item 5 – Monitoring and Adaptive Management), drawing on Appendix RC3 and Appendix RB2.
- Biofouling management and removal are addressed in the exhibited EIS at Section 9.4.2 (Genetics, Disease and Introduced Pests) and the Monitoring and Maintenance Plan (EIS Appendix B6), and biofouling effects on the benthic environment at EIS Section 9.1.2 and Section 9.4.1.

Accordingly, introduced marine pests, biofouling management, surveillance and notification requirements are addressed through the revised Biosecurity Plan (Appendix RC3, including BM1 and BC1) and Biosecurity Risk Assessment (Appendix RB2), with the surveillance metrics, trigger thresholds and notification pathways summarised in Appendix HAZ1 – Biosecurity Monitoring, Triggers and Responses in Appendix RC3 Biosecurity Plan.

13. Pathogens and disease management procedures

DPIRD requested additional information regarding hygiene procedures, stock-health assessment and disease monitoring.

Response

Accepted. The revised documentation includes health-verification procedures, monitoring requirements, hygiene controls, record keeping and response actions for suspected disease events.

These matters were also addressed in the exhibited EIS and elsewhere in this Submissions Response Report, as set out below:

- **Hygiene procedures** are described in the Hygiene and Containment provisions at EIS Section 9.4.2 (Genetics, Disease and Introduced Pests), including operation of the hatchery as a closed,

recirculating seawater system with filtration and sterilisation, regular disinfection of surfaces, culture containers and handling equipment using food-grade, marine-safe biocides between batches, filtration of water sources before use, and clean-zone entry protocols with hand disinfection to prevent cross-contamination. These are consolidated and expanded in the revised Biosecurity Plan (Appendix RC3).

- **Stock-health assessment** is described in the Visual Health Screening provisions at EIS Section 9.4.2, under which each sorus, gametophyte and sporophyte specimen is examined for signs of epiphytic overgrowth, fungal lesions, bleaching or unusual morphology, any specimen showing signs of stress or disease is excluded from cultivation, and propagation tanks are monitored for bacterial or fungal contamination, algal overgrowth or abnormal spore development. The revised Biosecurity Plan (Appendix RC3) formalises these as seedstock screening and health-verification procedures prior to deployment, as also confirmed at Item 6 above in this Section 5.14 (Hatchery biosecurity protocols).
- **Disease monitoring** is addressed in the revised Biosecurity Plan (Appendix RC3) and the disease and pathogen assessment in the Biosecurity Risk Assessment (Appendix RB2), and is summarised in the monitoring framework confirmed in the response to DCCEEW at Section 5.12 (Item 5 – Monitoring and Adaptive Management), which lists disease and mortality monitoring, trigger thresholds and management responses. The corresponding surveillance metrics, trigger threshold and notification response are set out in the "Biosecurity — pests and disease" indicator in Table 11 of this report.
- **Record keeping** for stock health is supported by the batch traceability system described at EIS Section 9.4.2 (parent tissue source, collection date and deployment location, enabling batch recall and field issue identification), consolidated in the revised Biosecurity Plan (Appendix RC3).

Accordingly, hygiene procedures, stock-health assessment and disease monitoring have been addressed through the revised Biosecurity Plan (Appendix RC3) and Biosecurity Risk Assessment (Appendix RB2), building on the Hygiene and Containment and Visual Health Screening provisions at EIS Section 9.4.2.

14. Hatchery contamination and culture failure

DPIRD requested additional detail regarding contamination detection and response procedures.

Response

Accepted. The revised Biosecurity Plan (Appendix RC3) includes monitoring, investigation and corrective-action procedures relating to hatchery contamination, culture failure and stock-health management.

These matters were also addressed in the exhibited EIS and elsewhere in this Submissions Response Report, as set out below:

- Contamination detection is founded on the propagation-tank monitoring described at EIS Section 9.4.2 (Genetics, Disease and Introduced Pests), under which tanks are monitored for signs of bacterial or fungal contamination, algal overgrowth or abnormal spore development, and any specimen showing signs of stress or disease is excluded from cultivation. These controls are consolidated in the revised Biosecurity Plan (Appendix RC3).
- Hatchery contamination pathways are assessed in the Biosecurity Risk Assessment (Appendix RB2), and hatchery contamination controls, disease response procedures and corrective actions are set out in the Biosecurity Control Table (BC1) within the Biosecurity Plan (Appendix RC3).
- Response and corrective-action arrangements for suspected contamination or culture failure are supported by the revised Emergency Response Plan (Appendix RC2) and the hatchery-water-testing metric in the "Biosecurity — pests and disease" indicator of Table 11 of this report.

Accordingly, contamination detection and response procedures are addressed through the revised Biosecurity Plan (Appendix RC3, including BC1) and Biosecurity Risk Assessment (Appendix RB2), building on the propagation-tank monitoring provisions at EIS Section 9.4.2.

15. Equipment, vessel and personnel controls

DPIRD requested additional information regarding cleaning procedures, movement controls and operational zones.

Response

Accepted. Additional detail has been incorporated regarding equipment cleaning, vessel controls, personnel hygiene requirements and movement-management procedures between hatchery and offshore operations.

These matters were also addressed in the exhibited EIS and elsewhere in this Submissions Response Report, as set out below:

- **Cleaning procedures** for infrastructure and equipment are described in the exhibited EIS at Section 9.4.9 (Resource Use and Waste), including regular cleaning of longlines, at least annual cleaning of the mooring connection point, chemical-free cleaning using scraping tools or salt-water pressure equipment, and observation for unusual marine organisms or suspected marine pests during cleaning. These are consolidated and expanded in the revised Biosecurity Plan (Appendix RC3).
- **Movement controls and hatchery-to-farm transfer protocols**, together with vessel, equipment and personnel controls, are set out in the vessel, equipment and personnel controls and hatchery-to-farm transfer protocols recorded in the revised Biosecurity Plan (Appendix RC3), with the corresponding equipment-movement and stock-transfer pathways assessed in the Biosecurity Risk Assessment (Appendix RB2).
- **Operational zones** and equipment/vessel biofouling controls are addressed through the Biosecurity Control Table (BC1) within the Biosecurity Plan (Appendix RC3), and vessel and equipment hygiene is also captured in the biosecurity provisions integrated into the revised Environmental Management Plan (Appendix RC4).

Accordingly, cleaning procedures, movement controls and operational zones are addressed through the revised Biosecurity Plan (Appendix RC3, including BC1) and Biosecurity Risk Assessment (Appendix RB2), building on the infrastructure-cleaning and personnel-hygiene provisions at EIS Section 9.4.9 and Section 9.4.2.

16. Emergency contacts and notification procedures

DPIRD requested specific contact details and reporting pathways.

Response

Accepted. A dedicated Biosecurity Contact Directory has been incorporated into the revised Biosecurity Plan (Appendix RC3), including DPIRD Aquatic Biosecurity, Fisheries, the Emergency Animal Disease Hotline and other relevant agency contacts.

These matters were also addressed elsewhere in this Submissions Response Report, as set out below:

- Notification pathways, regulatory reporting requirements and emergency contacts are set out in the revised Emergency Response Plan (Appendix RC2) and the notification, escalation and incident-management requirements in the Biosecurity Control Table (BC1) within the Biosecurity Plan (Appendix RC3).
- The primary notification pathway for a biosecurity detection is recorded in the Appendix HAZ1 – Biosecurity Monitoring, Triggers and Responses found in Appendix RC3 Biosecurity Plan, which directs isolation and notification under the Biosecurity Plan and contact with the Emergency Animal Disease Hotline on 1800 675 888.
- Regulatory notification obligations under the Biosecurity Act 2015 (NSW), including the General Biosecurity Duty and prohibited/notifiable matter reporting, are addressed at Item 4 above in this Section 5.14 and in the revised Biosecurity Plan (Appendix RC3).

Accordingly, specific contact details and reporting pathways are provided through the Biosecurity Contact Directory in the revised Biosecurity Plan (Appendix RC3), supported by the Emergency Response Plan (Appendix RC2).

Outcome

The supplementary comments provided by DPIRD Aquatic Biosecurity have been reviewed and addressed through the revised biosecurity framework consolidated in Table 22, comprising the revised Biosecurity Plan (Appendix RC3, incorporating the Biosecurity Management Table (BM1) and Biosecurity Control Table (BC1)), the dedicated Biosecurity Risk Assessment (Appendix RB2), the Knowledge Gaps and Uncertainty Register (Appendix RB3), and the revised Emergency Response Plan (Appendix RC2) and Environmental Management Plan (Appendix RC4). Together with the exhibited EIS, these documents address the matters raised — hatchery biosecurity, disease and pathogen assessment, introduced marine pests, seedstock health verification, monitoring and surveillance, reporting obligations, emergency response arrangements and compliance with the Biosecurity Act 2015 (NSW).

The SSD assessment framework places the onus on the Proponent to identify, assess and manage all material risk pathways associated with the Project. At the request of DPIRD and DCCEEW, the Project's biosecurity risks have been re-examined on a systematic, pathway-by-pathway basis in Appendix RB2 — spanning vessel biofouling, hatchery water intake, equipment movement, stock transfer, natural dispersal, disease transmission, pathogen amplification, nuisance fouling and climate-related stressors — with each pathway assigned specific controls, an evaluated likelihood and consequence, and a justified residual-risk conclusion. The assessment does not rest on qualitative assertion; it evaluates every credible pathway where possible, documents its assumptions and uncertainties, and demonstrates that the identified risks are capable of being effectively managed. Auskelp maintains its position that offshore cultivation of native *Ecklonia radiata* is one of the lowest-biosecurity-risk forms of marine aquaculture.

This precautionary, adaptive and evidence-based framework, reinforced by ongoing oversight under the aquaculture permit and the General Biosecurity Duty, provides a robust and defensible basis on which the residual biosecurity risk of the Eden-1 Kelp Aquaculture Farm is concluded. Every effort has been made to address all matters raised by DPIRD Aquatic Biosecurity.

6.0 UPDATED PROJECT JUSTIFICATION

6.1 Project remains as proposed

The Project assessed in this Submissions Response Report remains the Project described and assessed in the exhibited Environmental Impact Statement, with no change to the proposed activity, location, scale, or assessment framework. The Project is a 200-hectare offshore *Ecklonia radiata* aquaculture lease within Aquaculture Lease AL21/004 in Disaster Bay, NSW, located a minimum of 1.1 km offshore in waters of 20–25 m depth over unconsolidated sandy substrate, cultivating native kelp using sub-surface longline infrastructure, with no land-based footprint within the Wonboyn locality, Nadgee Nature Reserve, or any adjoining coastal reserve, and using existing port and infrastructure at Snug Cove (and possibly within the Edrom precinct at a later date).

No amendment to the Project description, Project area, development footprint, or operational profile is proposed in response to submissions or agency advice. The refinements and additional detail provided through this Submissions Response Report have been prepared to address matters raised by agencies and the community, and relate to operational controls, monitoring commitments, adaptive management measures, and implementation detail. These refinements remain within the assessed Project envelope and are appropriately characterised as clarifications and project refinements, rather than changes to the Project, consistent with the State Significant Development Guidelines.

6.2 Regulatory Context – Offshore Aquaculture Development in NSW

A central matter that requires consideration in the Project evaluation is the regulatory framework within which this Project has been developed, because the available framework explains a great deal about the position the Proponent now finds itself in, and about why public debate over the Project has taken the shape it has.

Under Schedule 1 of the State Environmental Planning Policy (Planning Systems) 2021 (the "Planning Systems SEPP"), aquaculture development is declared State Significant Development (SSD) if it:

1. has an estimated development cost of more than $30 million; or
2. is located in an "environmentally sensitive area of State significance."

These are alternative triggers. Either one is sufficient to declare the development SSD.

The definition of "environmentally sensitive area of State significance" is set out at Section 2.2 of the Planning Systems SEPP. The first listed limb of that definition is:

"(a) coastal waters of the State"

"Coastal waters of the State" is a defined term comprising, broadly, the territorial sea adjacent to New South Wales out to 3 nautical miles. It captures essentially all of the State's open ocean and coastal marine waters within that limit. The proposed lease at Disaster Bay lies >1.1 km offshore, well within those coastal waters.

The combined effect of these provisions is consequential: *every* commercial aquaculture project located in the coastal marine waters of New South Wales is automatically declared State Significant Development, regardless of *risk*, regardless of estimated *development cost*, and regardless of the size of its footprint. A 1-hectare commercial kelp farm in NSW coastal waters requires the same full SSD process as a 1000-hectare farm — the same multi-year approvals timeline, the same multi-million-dollar specialist study costs, the same public exhibition, the same agency consultation, and the same EIS and approvals determination. The only exception within the aquaculture category is oyster aquaculture, which is exempt from this provision under the *Fisheries Management Act*.

This regulatory architecture has two consequences that this SRR respectfully invites the Department and the broader community to consider:

<u>Consequence One</u>

There is no incremental kelp industry development pathway available (under current law) in NSW.

The Proponent did not have the option of developing offshore kelp aquaculture at 10 hectares, 25 hectares, or 50 hectares under a lighter-touch regulatory pathway. The same multi-year SSD process would have been required at any of those scales. A proponent attempting to establish offshore kelp aquaculture in NSW is presented with a binary choice: undertake the full SSD process… or do not attempt the industry at all.

That structural constraint is the single most important regulatory fact in understanding the Project's footprint. The 200-hectare scale is not an expression of Proponent ambition or commercial appetite at the expense of the community or the environment; it is the minimum scale at which the long-term industry development case can be made within the only regulatory pathway available. A smaller proposal would not have been economically capable of bearing the SSD regulatory time and costs; would not have generated sufficient cultivation volume; and would not have justified the significant investment in evaluation, testing, hatchery, processing, market development, supply-chain integration, and workforce capability that is required to establish this industry in NSW.

Consequence Two

Any future expansion requires a separate SSD process.

The lease, if approved, cannot quietly grow. The Project cannot expand beyond the 200-hectare lease boundary without an *additional* State Significant Development application, the preparation of a new EIS, a new public exhibition, agency consultation and possible IPC determination. The footprint approved by this assessment is, in regulatory terms, the operational ceiling of the Project unless another multi-million-dollar, multi-year approvals process is undertaken. The lease cannot grow except through a wholly new SSD process with community consultation, a critical fact that does not appear to have been understood by some of the submitters who object to the Project on the basis of "permanent industrialisation" or "creeping expansion" concerns.

These two consequences, taken together, mean that the Project comes before the Department as a single, all-or-nothing decision at a scale determined primarily by the extensive regulatory framework required. There is no smaller, less-contested commercially viable versions of this Project that the Proponent could have brought forward instead. And the fact that >6 years has been expended just to get to this point is a reflection of the exceptionally high bar to entry in NSW.

6.3 Evaluation of Opposition

Across the substantial body of objection submissions analysed in Section 3.0, and responded to in Section 4.0 , a significant proportion of objections contain factual misunderstandings or mischaracterisations of the Project. The cumulative effect of these mischaracterisations has been to pit the Proponent against a narrow vocal group across a multi-year regulatory process (and exhibition period) in ways that are not reflective of the actual environmental, social or economic profile of the Project. The Proponent acknowledges that there is genuine opposition grounded in well-considered concerns about scale, location, wilderness character and place identity — and that some people do not want this to be located – in what they believe – is their backyard. The Proponent respects those concerns in all their forms.

However, the Proponent requests the Department weigh the responses in Section 4.0 carefully, on their substantive merits, to distinguish genuine issues raised from objection submissions that rely on facts that (a) do not challenge the risk profile of the project (b) fail to consider any context and the associated positive outcomes, and (c) those that have not stood up to scrutiny clarified and addressed in this Response Report.

6.4 Policy Support

The Project is not a speculative or isolated venture. It sits squarely within, and gives practical effect to, a substantial and consistent body of Commonwealth, NSW and regional plans and strategies that have, over the better part of a decade, identified sustainable aquaculture — kelp farming in particular — as a strategic priority for New South Wales and for the far south coast specifically. The development of a regional kelp aquaculture industry is not something the Project asks government to contemplate for the first time; it is something government policy has actively sought to bring about.

The Project is directly aligned with, and advances the objectives of the following Commonwealth, State and regional instruments:

- NSW Seaweed Industry Prospectus 2024;
- NSW Marine Estate Management Strategy 2018–2028;
- NSW Marine Waters Sustainable Aquaculture Strategy 2018 (MWSAS);
- NSW Aquaculture Industry Development Strategy 2017;
- NSW Net Zero Plan Stage 1: 2020–2030;
- South East and Tablelands Regional Plan 2036;
- Draft South East Tablelands Regional Plan 2041;
- Far South Coast Regional Economic Development Strategy 2023;
- Bega Valley Shire Community Strategic Plan 2042;
- National Aquaculture Strategy 2017;
- Australian Seaweed Industry Blueprint 2020;
- National Marine Science Strategy: Building Blue Futures 2026-2036;
- Australia's Draft Sustainable Ocean Plan 2040;
- Modern Manufacturing Strategy Food and Beverage Roadmap 2021; and
- Marine Bioproducts Cooperative Research Centre (MBCRC) Strategic Plan 2025-2028.

The chairman of the Marine Bioproducts CRC (a federally funded Cooperative Research Centre with a direct role in supporting marine bioproduct research and development) has provided a signed letter of support attached to the SRR that states, "*We regard the Eden-1 project as one of the most important offshore aquaculture initiatives currently proposed in Australia*". Support letter is attached as Appendix RD3 MBCRC Eden-1 Support letter.

Each of the above instruments support the concept of a sustainable, regional, climate-resilient Australian kelp aquaculture industry developed in communities such as Eden.

Yet despite this clear and sustained policy direction, there is no straightforward path to approve kelp farming in NSW. The plans and strategies set the destination, and yet the regulatory framework does not provide a simple road. The Project has had to be developed and assessed through the State Significant Development pathway — the most demanding assessment route available — not because a 200-hectare, low-impact, low risk, native-species, predominantly sub-surface kelp farm inherently warrants that level of scrutiny, but because the existing licensing framework offers no alternative for offshore aquaculture at any scale. A proponent seeking to realise the very industry these policies call for is therefore required to carry the full regulatory and financial burden of a major project, with no staged or smaller-scale entry point through which the industry could be established incrementally.

6.5 Independent Planning Commission

If required, the Proponent welcomes the determination of this Project by the Independent Planning Commission. The IPC is arguably the most appropriate consent authority for a Project that has been through such a complex regulatory process – despite its low risk rating, in a location of this type with a body of submissions exceeding 50 unique objections. The IPC's independent, merits-based determination — drawing on the EIS, the submissions, multiple-agency advice, this Submissions Response Report and associated documentation and technical reports, and finally the Department's Assessment Report – will provide the most independent assessment pathway available under the NSW planning system.

6.6 Conclusion

The Project assessed in this Submissions Response Report and associated documentation remains the Project assessed in the Environmental Impact Statement (v9.4 dated 13 March 2026), without material changes. The Proponent stands by all matters concluded in EIS Section 11.0 Project Justification.

The scale of the Project reflects the regulatory framework available — a framework that automatically requires SSD approval for every aquaculture project in NSW coastal marine waters, regardless of scale, and that offers no proportionate pathway for smaller-scale development. The Project is a long-term regional and environmental investment, undertaken with clear commercial conviction and a deeply held sense of moral obligation to the locality and to the marine environment. A substantial body of opposition exists, some of it founded in genuine concerns that this report has addressed respectfully, and some grounded in factual misunderstandings of the Project that this report has corrected on the record. All matters referred to by NSW government agencies have been comprehensively addressed.

This Submissions Response Report confirms, on the basis of the exhibited Environmental Impact Statement, the specialist assessments, the agency advice and the further analysis undertaken through this process, that the Eden-1 Kelp Aquaculture Farm presents a "low residual risk across environmental, social and economic considerations". Every material impact pathway has been assessed on a systematic, risk-based basis, and the residual risks remain Low or Negligible following implementation of the Project's mitigation measures, monitoring programs and adaptive-management frameworks. Having regard to the precautionary principle, inter-generational equity, the conservation of biological diversity and ecological integrity, and the appropriate evaluation of environmental matters, the Project remains consistent with the principles of ecologically sustainable development. Supported by local testing, scientific evidence, regulatory guidance, operational precedent and extensive community consultation – and cultivating a native species with no feed, fertiliser or chemical inputs – the Project delivers clear long-term benefits to the region and to NSW while maintaining a demonstrably low risk profile.

The Proponent welcomes the determination of this Project on its merits.

7.0 REFERENCES

Note: objector citations – where embedded in published quotes – are also included.

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8.0 APPENDIX DOCUMENTS

8.1 Appendix RA – Submissions Matrix

- RA1 Submissions Response Matrix

8.2 Appendix RB – New Documents

- RB1 Assessment of Significance Report (ASR)
- RB2 Biosecurity Risk Assessment (BRA)
- RB3 Knowledge Gaps Uncertainty Register (KGUR)
- RB4 Social Impact Assessment Adequacy Report (SIAA)
- RB5 Eden-1 Technical Testing and Development Report (TTDR)
- RB6 Maritime Archaeology Assessment Eden-1 Kelp Aquaculture Farm (MMA)
- RB7 Eden-1 EIS Consolidated Reference List (Updated 7 July 2026)
- RB8 Eden-1 Phase GIS Data (GDA2020/MGA2020 Coordinate Table)

8.3 Appendix RC – Updated Documents

- RC1-B1 Marine Fauna Interaction Plan (MFIP)
- RC2-B3 Emergency Response Plan (ERP)
- RC3-B5 Biosecurity Plan (BP)
- RC4-B7 Environmental Management Plan (EMP)
- RC5-B2 Cultural Heritage Response Plan (CHRP)

8.4 Appendix RD – Supplementary Documents

- RD1 NSW EPA's Broadscale Microplastic Assessment of NSW Estuaries (2026)
- RD2 Save Disaster Bay Analysis 2026
- RD3 MBCRC Eden-1 Support Letter 2026

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