

Environmental Impact Statement Guidelines

*Huon Aquaculture Company Pty Ltd
Marine Farming Lease No. 261
Realignment and Variation of
Environmental Licence No. 9887 -
Storm Bay off Trumpeter Bay*

June 2024



ENVIRONMENT PROTECTION AUTHORITY

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Glossary and abbreviations

Term	Definition
Board	Board of the Environment Protection Authority
Case for assessment	Information required for environmental impact assessment, prepared according to the Board's requirements.
Director	Means the Director, Environment Protection Authority holding office under Section 18 of the <i>Environmental Management and Pollution Control Act 1994</i> and includes a delegate or person authorised in writing by the Director to exercise a power or function on the Director's behalf.
EIS	Environmental Impact Statement
EMPCA	<i>Environmental Management and Pollution Control Act 1994</i>
EMPCS	Environmental Management and Pollution Control System. Objectives found in Schedule I of EMPCA.
Environmentally hazardous material	Means any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils, waste and chemicals but excludes sewage.
EPA	Environment Protection Authority. Tasmania's independent principal environmental regulator which administers EMPCA and consists of a Board and a Director.
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
JAMBA/CAMBA	Japan-Australia and China-Australia Migratory Bird Agreements
LUPAA	<i>Land Use Planning and Approvals Act 1993</i>
MNES	Matters of National Environmental Significance
Noise sensitive premises	Residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.
Planning Authority	Council for the relevant Local Government Area
RMPS	Resource Management and Planning System, Tasmania. Objectives found in Schedule I of EMPCA.
Suitably qualified person	Means suitably qualified person in the opinion of the Director
TSPA	<i>Threatened Species Protection Act 1995</i>

Part A. Introduction

These Guidelines provide instructions for proponents on how to prepare an Environmental Impact Statement (EIS) for an activity being assessed in Tasmania by the Board of the Environment Protection Authority (the Board). The Board uses an EIS as a 'case for assessment', to assess the environmental impact of an activity, as required under the *Environmental Management and Pollution Control Act 1994* (EMPCA).

The role of the EIS

An EIS is generally required for larger scale developments classed as requiring 2B or 2C assessments under EMPCA. It is a document that provides information about a proposal, its potential impacts and proposed mitigation measures. As a publicly available document, an EIS should facilitate public consultation and informed comment and should contain sufficient information to establish the conditions of approval by authorities, if approved.

The EIS should demonstrate that the proposal is consistent with the objectives of relevant laws and policies, including the Tasmanian Resource Management and Planning System (RMPS) and the Environmental Management and Pollution Control System (EMPCS). These systems are designed to facilitate sustainable development.

Further information on the EPA Assessment Process is available on the [EPA website](#).¹

Refer also to Appendix A *General principles for assessing environmental impacts*, for further information on EIS principles.

How the Board uses the EIS

The Board uses the EIS to inform decision making as part of the environmental impact assessment process. The EIS must be prepared in accordance with guidance provided by the Board under section 74(4) of EMPCA. The staff of the EPA support the Board during the assessment process.

The EIS will be advertised publicly to allow for public consultation. The proponent may then be required to supply additional information in response to public and government agency submissions. This information is generally supplied in the form of a supplement to the EIS.

The Board considers the EIS as well as other relevant information in the context of the objectives of the RMPS and EMPCS. These objectives aim to sustain the environment and avoid or mitigate adverse effects, while considering the economic and social needs of people now and in the future. The Board will endeavour to make the decision which best furthers the objectives of the RMPS and EMPCS. It may approve the proposal with conditions, or in some cases may decide to reject the proposal if the objectives cannot be upheld.

The Environmental Impact Statement Guidelines are adapted for each specific proposal. In general, more detailed studies and information will be required where issues are considered by the Board to involve a higher level of environmental risk.

Other significant matters may emerge while preparing the EIS, from environmental studies, public comments, or other sources. These must also be considered in the EIS. Information collected or generated during the assessment process may also change the understanding of the level of risk associated with some issues. This must also be reflected in the EIS.

¹ See <https://epa.tas.gov.au/Pages/Assessment-Process.aspx>

Part B. Instructions

The EIS must present information in a way that can be easily understood. It should provide summaries in non-technical language to give readers a general understanding of the proposal. It must also provide technical detail to allow analysis and understanding of impacts and mitigation measures by technical specialists, regulatory bodies, and people with an interest in specific matters arising from the proposal.

Section C of these Guidelines sets out the structure and **minimum** content requirements of the EIS.

Proponents are advised to consult the EPA during preparation of the EIS, including in the case of any uncertainty in relation to the requirements set out in these Guidelines.

General requirements

- Avoid technical terminology where possible in the main body of the EIS. It should be able to be read as an independent document which provides a general understanding of the proposal.
- Include any detailed technical data or supplementary reports as appendices.
- Consider document accessibility. The Australian Government Style Manual provides information about inclusion and accessibility.
- Use cross-referencing to prevent unnecessary duplication between sections.
- Reference all sources of information using a consistent style.
- Define all key terms and words used.
- Information in the EIS must be relevant.
 - Show reasoning for arguments. Support conclusions with referenced evidence.
 - Indicate how current information is, how reliability has been tested, and the degree of confidence attached to any predictions.
 - Sufficient technical detail must be provided to allow for environmental impact assessment, even when details are not final at the time of preparation.
 - If information is currently unavailable, estimates and alternative options should be provided, however the limitations of available information must be evaluated.
- Provide any sensitive commercial or corporate information in a confidential appendix. Provide a comment in the EIS if this has been done.

The EIS must not include information that is known to be false or misleading, and nothing should be omitted if it is known that without it the EIS would be false or misleading (section 43A of EMPCA).

Spatial and visual information requirements

- Present information in maps, plans, diagrams, and photographs where necessary, to enhance understanding.
- Images must be high quality and reproducible in monochrome, with all text and relevant features clearly visible.
- Maps and plans should include a north arrow and scale.
- Use a consistent base plan throughout the EIS where appropriate, to allow elements to be overlaid and compared. Ensure that detailed information is clear and visible, particularly when using satellite images as background layers. This is best achieved using a geographical information system (GIS).

- Specify the coordinate reference system when providing or referring to spatial information, including maps, plans, grid coordinates and heights. Further information on coordinate reference systems used in Tasmania can be found on the [Land Tasmania website](#)².

Recommended systems are:

- Horizontal – Geocentric Datum of Australia 1994³ Map Grid of Australia Zone 55 (GDA94 MGA55)
- Vertical – Australian Height Datum (Tasmania) (AHD83).

Submission

It is strongly recommended that proponents submit a draft EIS to the EPA for review prior to formal lodgement of the EIS with the Board.

The EIS (and any drafts submitted for review) may be submitted via email to assessments@epa.tas.gov.au and your nominated contact officer. Proponents should contact the EPA if alternative submission methods are deemed necessary.

² See <https://nre.tas.gov.au/land-tasmania/geospatial-infrastructure-surveying/geodetic-survey/coordinate-height-and-tide-datums-tasmania>

³ Geocentric Datum of Australia 2020 (GDA2020) is the new official datum for recording the horizontal location of spatial information in Australia but is not yet fully implemented in Tasmania.

Part C. EIS structure and content

The EIS should follow the structure set out below and must address all requirements unless otherwise agreed following consultation with the EPA. For clarity, organise content with further headings and subheadings as appropriate.

Title page

The title page must include:

- Name of proponent (legal entity)
- Name of proposal (include “expansion” or “upgrade” where appropriate)
- Proposal address or location
- EIS version number
- Month and year of submission

Executive summary

The executive summary must provide a clear and concise overview of the proposal, its environmental implications, and the function of the EIS in the context of the assessment process. For a larger EIS, the executive summary must be written as a stand-alone document for people who may not wish to read or acquire the full EIS.

Table of contents

The EIS must include a table of contents and a list of figures and tables to allow the reader to easily locate information. The table of contents should include hyperlinks to allow documents to be navigated easily.

Glossary and abbreviations

Provide a list of abbreviations and acronyms and a glossary which clearly defines any technical terms used in the EIS.

Proponent information

Proponent details:

- Name of proponent (legal entity)
- Name of proponent (trading name)
- Registered address of proponent
- Postal address of proponent
- ABN
- ACN (where relevant)

Contact person’s details:

- Name
- Telephone
- Email address

Activity Operator details must be provided if the operator will be a different entity to the proponent.

I. Introduction

The introduction should provide:

- General background information on the proponent
- General background information on the proposal, including:
 - current status of the proposal;
 - an overview of the principal components of the proposal;
 - the proposal location;
- As the proposal is associated with an existing activity, provide information on current permits, regulatory approvals and licences.
- Information to satisfy the requirements of section 42L of EMPCA ‘fit and proper person’ test, including:
 - Whether the person to whom the Environmental Licence (EL) may be granted:
 - has contravened EMPCA; or
 - has, in the last 5 years, been convicted of an offence which is considered by the Director or Board to be an offence relevant to the holding of the EL against EMPCA, any other Act, or a law of another State, a Territory, or the Commonwealth, that relates to the protection of the environment.
 - Whether the person (including a body corporate) is a ‘fit and proper person’ to hold an EL in accordance with the following criteria:
 - Has the person, or an associate, committed an offence against a provision, of a law, relating to protection of the environment?
 - Has the person, or associate, failed to comply with a duty, including duty of care, imposed on the person in relation to protection of the environment?
 - Has the person, or associate, caused environmental harm?
 - Has the person sought to be declared bankrupt, or to be deregistered as a corporation under the Corporations Law, for the purpose of avoiding liability for the offence of failing to comply with the duty or for causing environmental harm, or liability to pay a fine, penalty, including a civil penalty, or damages, in relation to the offence, failure to comply with duty or the causing of environmental harm?

Note that information provided will be confirmed with other jurisdictions as relevant.

2. Proposal description

This section of the EIS should simply and clearly provide information relating to all aspects of the proposed operation, including locational information, descriptions of lease realignments and ongoing operations. Use tables, maps, diagrams, and/or flow charts where possible to simplify and clearly present the information.

2.1 Activity description

A general description of the activity should be provided, including but not limited to the following information:

- Fish to be farmed:
 - species of finfish;
 - size ranges;
 - stocking densities;
 - fish numbers in lease and lease blocks;
 - maximum biomass for the lease and lease blocks;
- A description of how the lease blocks will be used and how this may change over time
- Stocking/fallowing plans and year-class details for the operation.
- How the lease blocks will be managed relative to other nearby leases in terms of stocking plans and fallow periods. Will the lease and lease blocks be fallowed alternately while other neighbouring leases are stocked, and vice versa?
- Normal operating hours/times (daily, weekly, annually) where staff and vessels are likely to be present and working on the lease blocks, and times of year/production cycle when daily operating hours may be longer than normal/activity peaks (e.g. during stocking, harvesting, bathing, etc).
- Freshwater requirements and methods of providing freshwater to the lease blocks (e.g. pumps, pipelines, barges/boats, etc).
- Details (including quantities) regarding storage of fuels/hydrocarbons/chemicals on the lease blocks and transfer of these materials to the lease blocks, and into equipment.
- Major items of plant and ancillary equipment (power supplies, generators, compressors, pumps) to be used on and around the lease blocks, either permanently or temporarily.
- Describe the frequency of in-situ cleaning of pen collars and nets activities and provide a description of how they are undertaken.
- Details of fish bathing – towed liners and/or boat, source/volume of freshwater, expected frequency of bathing.
- Details of any barges (number, size, purpose) to be located permanently or temporarily on or adjacent to the lease blocks:
 - specific machinery equipment on these barges;
 - details of hazardous substances stored or held on these barges;
 - the specific purposes of the barge(s), and;
 - their proposed positions on or adjacent to the lease blocks.
- Waste management equipment and infrastructure for:
 - Removal/management of diseased fish;
 - Removal and disposal of mortalities;
 - Management of uneaten feed;
 - Management/avoidance of marine debris;
 - Waste produced from any in-situ net cleaning; and
 - Collection, treatment, disposal of grey and black water from staff facilities on the lease blocks.

- Details of feed:
 - Range of predicted biological feed conversion ratios (FCR) range for grow-out cycle;
 - How feed is delivered to the lease blocks, frequency of deliveries, and how feed is delivered to the fish within the pens, how feed rates are monitored, and details of feed storage on the lease blocks.
- Details of nets ('cages')/grids:
 - Net sizes, volumes, and depths/dimensions;
 - Net types/construction;
 - Anti-predation and anti-fouling properties;
 - Regular maintenance activities/net cleaning methodologies, and expected frequency of these activities;
 - How nets will be uniquely identified/labelled;
 - Grid configurations and the total number of nets to occupy the site.
- Lighting details, including number of lights, wattages, types of light emitted for:
 - Above surface lighting, e.g. required for safety, night works, etc;
 - Below surface lighting and including descriptions of whether lighting will be night only/continuous, and year round or at certain points in the production cycle.

2.2 General location

Provide general location map(s) which show the following:

- The relevant Marine Farming Development Plan Area, Zone, lease location and lease blocks within the Zone.
- The distance(s) between the lease blocks to any nearby sensitive uses (such as residences).
- Provide the boundary of the Land (the lease area) in a geospatial vector format (shapefile or DXF).

2.3 Lease boundaries

The spatial definition of the current lease (lease boundaries) and the proposed realignment must be provided. This should also be provided separately in a geospatial vector format (shapefile or DXF).

Additionally, provide a plan(s) of the lease and lease blocks which shows the following details for the existing and proposed realignment:

- Positions of any existing infrastructure located on the lease.
- Existing and proposed mooring infrastructure (including plans showing mooring and grid system design, and describe the environmental variables used to determine design specifications).
- Sediment types, and details of any reefs and seagrass beds.
- Proposed lease configuration (e.g. proposed blocks, pen locations/grids).
- The positions of facilities e.g. for feed, and permanent structures or vessels on the lease.
- Locations of any pipelines on the lease.
- The locations of temporary and permanent storage areas for fuels, oils, reagents and other hazardous goods or chemicals.
- The location(s) of any monitoring sites.

2.4 Lease realignment

Provide a step-by-step description and timetable for activities required to realign the lease blocks or set up for finfish farming (where applicable), including, but not limited to, the following details:

- Details of any pre-construction works, including preparation works, and any temporary or permanent structures on the seafloor which may impact on natural values or potential habitat.
- Details of any pre-works surveys to be carried out prior to commencement of construction, including baseline benthic surveys and surveys for threatened species.
- A description of the process for placing of temporary or permanent structures on the seafloor (moorings, anchors, etc) and any sediment suspension control measures to be used during installation.
- Nature, capacity, and location(s) of temporary construction/establishment equipment required on the lease blocks.
- Proposed staging or ramping up of introduction of fish to the lease blocks.
- A description of how deployment of the grid and mooring systems will occur, the timings (proposed hours per day and days per week) , the types of materials and equipment required, and the types of activities which will occur during deployment. The area required around the lease for deployment should also be described.

2.5 Lease decommissioning and rehabilitation

Describe plans for decommissioning of the lease and rehabilitation of the environment, including costs and timeframes for removal of infrastructure, destination for removed infrastructure (disposal, reuse), and proposed methods, costs, and timeframes for seabed remediation.

3. Public Consultation

Describe any public consultation that has taken place during project planning and preparation of the EIS, and summarise the results of this consultation. Describe any proposed future public consultation that will take place during project implementation and operation. The Board encourages early community engagement, as it often leads to better outcomes for all parties. Guidance on effective community engagement is available on the [EPA website](#).⁴

4. The Existing Environment

This section should provide a general description of the proposed lease location (including individual lease blocks) and the physical environment in which it is to be located, which is likely to be affected by the realignment, increase in area, and operation of the marine farming lease. Areas associated with any ancillary activities should also be described.

Where appropriate, include maps, plans, photographs, diagrams or other descriptive detail.

4.1 Environmental aspects

The following baseline or background information on the biophysical environment in which the changes to the lease is proposed should be provided. Detailed reports can be provided in appendices with summaries provided in the main EIS document:

- **Bathymetry:** a description and diagram of the bathymetric profile of the seabed for the lease and zone area should be provided.
- **Substrates:** Habitat types (e.g., soft sediment, seagrass, reef) within the lease should be displayed on a map, and for an area extending 100m beyond the lease block boundaries. Sediment samples should be taken using a 0.01m³ Van Veen grab and sediments characterised by colour, texture and odour. Data such as redox and sulphides, particle size analysis, organic content, and metals should also be provided.
- **Hydrology:** provide a description of the current flow (including direction and speed) at a range of depths across the lease. Results of Acoustic Doppler Current Profiler (ADCP) data collected within the zone should be provided.
- **Water quality:** provide a description of water quality parameters at the lease, including temperature, salinity, dissolved oxygen (DO) and DO saturation, dissolved nutrients, and chlorophyll a. Any available ambient monitoring results (e.g. for previous 2 years) for the vicinity of the proposed development should be provided in tabular or graphical form. The results may be summarised (e.g. as annual averages) if the summary will provide adequate information.
- **Marine vegetation** identified through surveys of the zone/lease.
- **Benthic fauna/infauna** identified in the zone/lease.
- **Fish species** present in the zone/lease area and surrounds, and species likely to be present based on the habitats present.
- **Birds** identified in the vicinity of the zone/lease area and any birds known to frequent any neighbouring leases, and birds likely to be observed in the area based on nearby habitats. Include any potential JAMBA/CAMBA/ROKAMBA migratory bird species.
- **Marine mammals** observed/recorded in the vicinity of the zone/lease within the previous 2 years.
- **Results of surveys** undertaken in the last 2 years for threatened species (State and Commonwealth listings) known to occur, or likely to occur in the vicinity of the zone/lease based on habitats.

⁴ See <https://epa.tas.gov.au/Documents/Guidance on Community Engagement.pdf>

5. Potential Impacts and Management

Identify all potential environmental impacts and describe the proposed measures to avoid, mitigate or offset adverse consequences. The detail provided on each issue should reflect its significance. While key issues are identified for the proposal, other issues that emerge as significant while preparing the EIS, through environmental studies, public comments or otherwise, must be considered and addressed.

Address each discrete issue separately, using headings and subheadings where necessary to organise and separate discussions.

Use scientific data, where it is available and necessary, to support predictions and evaluate impacts and provide references to the data used. Where specialist reports have been required for key issues, summarise them within the body of the EIS where relevant, and attach the reports as appendices. Detail the qualifications of the authors of any specialist reports. Make sure that the information in the body of the EIS is consistent with the information in the appendices.

General information requirements for each potential impact are described below, and are in addition to any specific information requirements detailed later in this section.

Methodology

- Describe how the assessment of the impact has been undertaken, such as by survey or desktop study.
- Identify any relevant guidelines and standards used.
- Discuss any choice of methodology over alternatives where relevant.

Assessment

- Clearly articulate potential impacts, using tables and figures to aid communication where possible.
- Support assertions and assumptions with adequate argument and/or evidence.

Avoidance and Mitigation Measures

- Describe the measures proposed to avoid, mitigate or offset potential adverse impacts.
- Detail any specialist recommendations which have been/will be implemented. Where specialist recommendations are not to be implemented, justify why. All recommendations made in specialist reports should be addressed.
- Analyse the effectiveness of the mitigation measures. Describe how and to what degree the impacts will have been avoided, minimised or offset.
- Discuss any residual impacts, referring to relevant guidelines or standards.
- Discuss any contingency measures related to pollution control equipment.

Refer to *Appendix A: General principles for assessing environmental impacts*.

6. Key issues

The key issues identified for this proposal, which should be the focus of the EIS, are:

1. Impacts on the benthic environment
2. Water quality
3. Biodiversity and natural values
4. Noise emissions
5. Hygiene, fish health and biosecurity

6.1 Key Issue: Impacts on the benthic environment

Provide the results of any background/ambient surveys and/or monitoring undertaken of sediments and infauna over the last 2 years. Full reports should be provided in the Appendices, and a summary provided in the main body of the EIS text.

The habitat types identified on and around the proposed benthic areas that will be affected by fish farming due to the proposed modifications are to be described, and the anticipated impacts of increased nutrient emissions, waste streams, chemicals, disturbance from establishment of infrastructure, reefs, seagrasses, marine vegetation, sediment chemistry, biological diversity of phytoplankton, infauna, benthic fish, sponges etc. discussed.

Predicted ecological responses and the significance of these responses should be described, and any ongoing research occurring in the region regarding impacts of finfish farming on the benthic environment (flora, fauna and chemistry) should be included. A summary of the impacts of finfish farming on benthic habitats lease sites should be included.

Undertake depositional modelling (e.g., using DEPOMOD or similar software) to model footprints of benthic impacts for a range of current and aspirational finfish production scenarios for the lease blocks.

Proposed monitoring and management actions to minimise impacts both during lease establishment, active farming and through fallow periods should be described.

Proposed monitoring and management actions during active farming and through fallow periods should be consistent with the objectives and requirements of the [Environmental Standards for Tasmanian finfish farming 2023](#).⁵

6.2 Key Issue: Water quality

Provide summary results of ambient/background monitoring of water quality parameters at the lease/zone in the main EIS text, for the previous 2 years as a minimum. Full data/reports should be provided in the Appendices and/or electronic water quality data provided separately to the EPA following the instructions and using the Excel workbook templates or file formats provided on the [Water Quality Data Elements](#).⁶

Discuss potential impacts of the proposal to farm finfish at each lease block and for the blocks combined on water quality at the lease, and beyond with respect to soluble and particulate nutrient emissions from stock/feed/faeces, and the soluble and particulate effluent stream from in-situ net cleaning.

Provide results of any modelling of impacts at the local and regional scale (e.g., soluble emissions, biogeochemical) which demonstrate the predicted fate and distribution of soluble and particulate nutrient emissions, predicted changes to background physical and chemical indicators, any predicted areas for

⁵ See <https://nre.tas.gov.au/Documents/Environmental%20Standards%20for%20Tasmanian%20Marine%20Finfish%20Farming%202023.pdf>

⁶ See <https://epa.tas.gov.au/environment/water/water-quality-data-elements>

accumulation or pooling of nutrient parameters, and predicted ecological responses. Include forecasted production data into dispersion models to model footprints of impacts.

The potential cumulative impact of the proposal within the region and for Storm Bay will need to consider existing marine farming and adjacent land based activities. Reports undertaken supporting this information should be provided in the Appendices and the results summarised in the main EIS text.

It must be demonstrated that the proposal is consistent with the objectives and requirements of the [State Policy on Water Quality Management 1997](#).⁷ Where appropriate, it must also be demonstrated that the proposal is consistent with the objectives and requirements of the [Environmental Standards for Tasmanian finfish farming 2023](#),⁸ made under EMPCA.

In particular, it must be demonstrated that the proposal will not prejudice the achievement of any water quality objectives set for water bodies under the [State Policy on Water Quality Management 1997](#).⁷ Default Guideline Values (DGVs) for aquatic ecosystems⁹ have been determined for the region which provide numerical values for the maintenance of key water quality indicators. Lease/zone specific guideline values may be required on the basis of modelled water quality impacts. For information about water quality management framework and evaluation criteria in Tasmania refer to [Technical Guidance for Water Quality Objectives \(WQOs\) Setting for Tasmania, August 2020](#).¹⁰

Management measures to minimise the impacts of increased nutrients in the water should be provided, a description of how these measures will mitigate impacts, and details of ongoing monitoring proposed. Monitoring locations beyond the lease should aim to augment and or compliment data from the Storm Bay Broadscale Environmental Monitoring Program (BEMP) initiated in August 2019.

6.3 Key Issue: Biodiversity and natural values

A description of the existing natural values which occur within and surrounding the proposed areas impacted by the lease realignment should be provided, with the results of any ecological surveys undertaken provided.

The potential impacts of the proposal on biodiversity and natural values, with particular focus on impacts on listed (State or Commonwealth) rare or threatened species or migratory species which may occur or have habitat in the vicinity of the lease should be described. This may include consideration of impacts on sea birds (e.g. albatrosses, petrels, prions, on the White-bellied sea-eagle), on fish (spotted handfish, red handfish, great white shark), and on mammals (long-nosed fur seal, southern right whale, humpback whale).

Impacts should be considered for all stages of lease realignment and operation and may occur due to establishment of the lease and mooring infrastructure, from increased nutrients in the water column, lighting, and vessel movements and noise. Where impacts cannot be avoided, proposed measures to mitigate and/or compensate adverse impacts on natural values should be described.

Impacts of disease and of escaped finfish on native species should also be considered and plans to avoid or manage escapes of disease and of actual fish should be described.

The existence of marine pests at the proposed new lease areas should be described, and any impacts expected on marine pest numbers and distribution due to variation of the lease. Proposed management actions for marine pest management and to avoid further spread should be described.

Describe the potential for interactions between aquaculture infrastructure (above and below the surface of the water, including vessel strike, entanglement, and collisions) with wildlife such as birds and mammals (e.g.

⁷ See <https://epa.tas.gov.au/about-the-epa/policy-legislation-cooperative-arrangements/statutory-policies/state-policies-and-environment-protection-policies/state-policy-on-water-quality-management-1997>

⁸ See <https://nre.tas.gov.au/Documents/Environmental%20Standards%20for%20Tasmanian%20Marine%20Finfish%20Farming%202023.pdf>

⁹ See <https://epa.tas.gov.au/Documents/Default%20Guideline%20Values%20for%20Aquatic%20Ecosystems%20Storm%20Bay%20-%20OSRA%20segment%2093.pdf>

¹⁰ See <https://epa.tas.gov.au/Documents/Technical%20Guidance%20for%20Water%20Quality%20Objectives%20%28WQOs%29%20Setting%20for%20Tasmania.pdf>

seals, cetaceans). Provide details of company policies and operating procedures relating to avoidance and management of these interactions, and the impacts these may have on wildlife. Examples of issues which should be described include seal deterrents, seal netting, bird netting, other exclusion measures, protocols for dealing with entanglements, and monitoring and maintenance regimes to ensure integrity of infrastructure.

6.4 Key Issue: Noise emissions

Provide a description of noise sources and the receiving environment that is to include:

- a description of the marine finfish farming lease and lease blocks and relevant noise sensitive premises¹¹, including suitable maps;
- an inventory of all noise sources that may be operating, on a permanent or temporary basis, on the lease blocks; and
- a description of the expected sound power levels emitted by any machinery and equipment identified through the inventory.

Provide an assessment of noise impact that includes:

- noise predictions or measurements that have been undertaken to determine noise emissions from the marine finfish farming activity, including the proposed changes, at relevant noise sensitive premises;
- an evaluation of the effects of predicted or measured noise emissions from the activity on relevant noise sensitive premises, including compliance with specified noise limits and comparison with the background noise +5 dB noise levels to assess for nuisance; and
- consideration of key items of equipment as well as cumulative noise emissions. Noise emissions must be presented separately for daytime, evening, and night-time.

In particular, the noise emissions from large vessels (e.g. well boats) and smaller support vessels working on the lease(s) should be discussed, in terms of times of year these will be working on the lease blocks, proposed times of day, and the estimated noise emission levels at nearest residences, particularly when other equipment on the lease block is still operating.

The towing on nets and/or freshwater bathing liners to and from the lease should also be discussed in terms of locations from where they will be towed (distances to the lease blocks), and any particular noise emission aspects of this activity.

Provide the above required material in the context of ensuring that cumulative noise emissions from the proposed activities meet the following noise limits:

- 45 dB(A) between 0700 hours and 1800 hours (Day time);
- 37 dB(A) between 1800 hours and 2200 hours (Evening time); and
- 32 dB(A) between 2200 hours and 0700 hours (Night-time).

All methods of measurement must be in accordance with the [Tasmanian Noise Measurements Procedure Manual](#).¹²

6.5 Key Issue: Hygiene, fish health and biosecurity

The release into the marine environment of antibiotics, cleaning chemicals, antifoulants and other chemical substances used in the maintenance of infrastructure, fish health and biosecurity may cause environmental harm by adding potential pollutants to waters. Note that fish health and biosecurity are regulated separately by biosecurity and marine farming legislation.

¹¹ 'noise sensitive premise' is defined as residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

¹² Available at https://epa.tas.gov.au/Documents/Noise_Measurement_Procedures_Manual_2008.pdf

The following issues should be considered and described in the EIS:

- Details of fish health problems experienced in the region;
- Details of how diseased fish on the lease will be monitored and managed (Will they be removed from the lease, or managed on lease? Are there 'hospital leases' available to move diseased fish? etc.).
- Key components of preventative disease programs;
- Proposed management of Amoebic Gill Disease (AGD) and other diseases;
- Biosecurity plans and related use of chemicals for biosecurity purposes, details of diseases to be prevented/managed through use of chemicals and therapeutants;
- Regular or routine use of chemicals, therapeutants, antibiotics – provide data on chemicals used, quantities, reason for use, frequency of use (regular or *ad hoc*), and authorisations required for their use;
- Any existing data on detection of chemicals used in marine farming in water and in other wild species;
- Impacts of disease (i.e., not using chemicals and therapeutants) on both farmed finfish and potentially on local wild species.

Impacts on local or regional environments (water, benthic environment, shorelines) and species of chemical usage should be described, and any contemporary studies relating to impacts of antibiotics, antifoulants, and aquaculture cleaning chemicals on water quality or on other species should also be discussed.

Measures to minimise the need to use chemicals and therapeutants and to manage release into the marine environment should be included.

6.6 Other marine and coastal impacts

Identify any potential impacts of the proposal on marine and coastal areas not addressed in other sections. It should identify measures to avoid and mitigate any possible adverse impacts and assess the overall impacts on marine and coastal areas following implementation of the proposed measures. Cross referencing should be made to other relevant sections dealing with conservation values (marine flora and fauna, geoconservation) and coastal impacts.

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant marine and coastal policies and legislation, including the [Living Marine Resources Management Act 1995](#),¹³ [State Policy on Water Quality Management 1997](#),¹⁴ and the [Tasmanian State Coastal Policy 1996](#).¹⁵

6.7 Waste management and marine debris

Discuss the impacts of waste generated by the proposal, including:

- Identify the source, nature, and quantities of all wastes, (liquid, atmospheric or solid) including general refuse and waste from staff facilities, and by-products from the various stages of the lease realignment and operation likely to be generated.
- Management of excess feed, bloodwater/harvest waste, daily mortalities, bathing and in-situ cleaning water release, and net cleaning waste should be addressed.

¹³ See <https://www.legislation.tas.gov.au/view/html/inforce/current/act-1995-025>

¹⁴ See <https://epa.tas.gov.au/Documents/Default%20Guideline%20Values%20for%20Aquatic%20Ecosystems%20Storm%20Bay%20-%20OSRA%20segment%2093.pdf>

¹⁵ See https://www.dpac.tas.gov.au/__data/assets/pdf_file/0010/11521/State_Coastal_Policy_1996.pdf

- The discharge of effluent from well boats should be discussed with reference to achieving compliance with the Sewage Management Directive under the [Marine-related Incidents \(MARPOL Implementation\) Act 2020](#).¹⁶
- Describe how daily/routine mortalities are managed and disposed of to prevent environmental nuisance/harm, including a description of the different current options in Tasmania for processing and/or disposal of mortalities.
- Methods and facilities proposed to collect, store, reuse, treat or dispose of each waste stream should be identified. Maintenance requirements should be included.
- The source, nature, quantity, and method of treatment, storage and disposal for each controlled waste should be described. Note: controlled waste is defined in EMPCA and associated regulations.
- Protocols to avoid generation of marine debris should be described, and how this is monitored and managed.

6.8 Mass mortality plan

Information about mass mortality planning at the regional, company, or industry level, this information should be provided. As a minimum, a plan for mass mortality management must include:

- Potential causes of a mass mortality event at the lease – ranging from deaths at the individual pen level, up to loss of fish from the entire lease – and an assessment of the likelihood of occurrence, and potential for impacts on nearby leases;
- Details of the maximum biomass quantities to be held in a single pen at any one time, as well as the maximum biomass to be held on the lease (particularly at times of peak biomass) and, working on an assumption that all fish in the pen/lease may be involved in a mortality event, details of the tonnages of waste which will require removal from the lease during a mass mortality event (from a small single pen event, up to a whole-of-lease event) and critical time components of such an event occurring;
- Detailed description of the operational procedures and methodologies for removal of mortalities from the lease, including the landing location, required machinery and other infrastructure, and expected timeframes for having specialised equipment brought to the lease and for completion of mortality removal from the lease.
- Provide information on treatment and/or disposal of mortalities, how mortalities will be transported to these locations, and whether proposed treatment/disposal locations have the capacity and authority to receive such waste and in the expected maximum quantities.
- Outline commitments needed to address gaps in on-lease and off-lease infrastructure, and the capacity of approved fish waste disposal facilities to manage the expected maximum waste volume from the lease.

Describe how environmental harm and nuisance occurring as a result of a mass mortality event will be avoided or mitigated, including avoidance and/or management of potential pollution of the ground and waterways, and management of odours likely to occur, during transfer of mortalities from the lease to the shore.

6.9 Dangerous goods and environmentally hazardous materials

Discuss impacts of the proposal in relation to dangerous goods and environmentally hazardous materials (any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils, waste and chemicals), including:

¹⁶ See <https://epa.tas.gov.au/about-the-epa/policy-legislation-cooperative-arrangements/acts-regulations/marpol>

- The nature, quantity and storage location of all environmentally hazardous materials including Dangerous Goods (as defined in the Australian Code for the Transport of Dangerous Goods by Road and Rail) that will be used on the lease during lease establishment and for ongoing operations.
- A plan showing the location of temporary and permanent storage areas for fuels, oils, and other dangerous goods or chemicals on the lease.
- The measures to be adopted to prevent or control any accidental releases of dangerous goods and environmentally hazardous materials into the marine environment, either during transfer of goods to/from the lease, and when being stored on the lease.
- Contingency plans for when control measures, equipment breakdowns or accidental releases to the environment occur, including proposed emergency and clean-up measures and notification procedures.
- Identify any safety management requirements for the protection of human health and safety affecting the community.

6.10 Emissions to air

The potential for odour and other emissions to air (e.g. from use of generators, compressors, etc) to create environmental harm or nuisance, particularly for nearby residents or other sensitive receptors, should be considered.

Describe all potential sources of odour or emissions to air, and the expected impacts, and how these impacts may be mitigated. This should include the potential odours emanating from the lease, and during transfer of mortalities from the lease, during a mass mortality event.

Consideration should be given to the requirements of the [Tasmanian Environment Protection Policy \(Air Quality\) 2004](#)¹⁷ and any supplementary documents (including the [Board Statement January 2022](#)).¹⁸

6.11 Lighting

Lighting on the lease for both operational/safety reasons, and for fish husbandry reasons, may create nuisance for residents near the lease.

Describe all possible sources of light on the lease (including on well boats, barges, and other vessels), times used and intensity, and how light will be managed to avoid creating nuisance.

Impacts of lighting on biodiversity and natural values (particularly underwater lighting) should be addressed in section 6.3 (Key Issues: Biodiversity and natural values).

6.12 Hazard analysis and risk assessment

If applicable, provide a preliminary analysis (appropriate to the scale of the project) of the potential for a major hazard event (such as an explosion, fire or oil/fuel spill on the lease) that may cause impacts to the environment to occur and proposed safeguards to prevent such an occurrence. The preliminary analysis should systematically identify all potential major environmental hazards (internal and external) to people and the environment associated with the construction, operation, maintenance, and decommissioning of the proposal.

Discuss the potential sources of fire on the lease and describe fire response actions on the lease.

¹⁷ Available at https://epa.tas.gov.au/Documents/EPP_Air_Quality_2004.pdf

¹⁸ Available at <https://epa.tas.gov.au/Documents/Board%20Statement%20-%20Update%20to%20Air%20Pollutant%20Design%20Criteria%20used%20in%20the%20EIA%20Process%20-%20January%202022.pdf>

Consideration of risk of deliberate tampering or vandalism causing damage which may result in environmental harm should also be discussed, and the measures (e.g. security, surveillance) to avoid and/or respond to such incidents described.

6.13 Environmental Management Systems and other certifications

Provide details of any certified Environmental Management System in place for the proponent or the proposed lease, or any other third party certifications which the proponent holds.

This section should also provide information on strategic matters relating to environmental management of the proposal, including a description of the following:

- Any relevant environmental management systems or environmental policies implemented or proposed by the proponent.
- Organisational structure and environmental responsibility within that structure for the proposal.
- Procedures and instructions to employees (including contractors) on minimising adverse environmental impacts of activities, as well as employee induction and education programs to ensure an appropriate response to operational environmental concerns, should be included in relevant sections.

7. Monitoring and Review

Outline any proposed monitoring, review and reporting programs for the proposal. Include a table of proposed monitoring locations, parameters and frequencies, and a map showing the location of all monitoring sites.

Monitoring, review and reporting programs should be designed to:

- Assess compliance with the proposed management measures;
- Assess compliance with emission standards and other identified performance requirements;
- Assess the effectiveness of the performance requirements and environmental safeguards in achieving environmental quality objectives; and
- Assess the extent to which the potential impacts described in the EIS have eventuated.

A map showing the location of all monitoring sites and a table of proposed monitoring including location, parameters and frequency should be included. Brief reasoning for the selection of monitoring sites (either proposed by the proponent, or in relation to existing monitoring sites) should also be provided.

8. Decommissioning and Rehabilitation

The EIS should describe an on-going, staged approach to rehabilitation throughout the proposal life and decommissioning following lease closure.

A preliminary Decommissioning and Rehabilitation Plan or Closure Plan should be outlined.

9. Management Measures Table

Provide a summary table listing all management measures detailed throughout the EIS. Each measure must include a reference number, must be an unambiguous statement of intent, must specify when it is to be implemented (including whether it is to be implemented during construction, operation, maintenance or other phases) and must include a cross-reference to where the measure is described in the EIS.

10. Conclusion

Summarise the proposal and present a balanced overview of its net impacts. Draw together the critical environmental, social and economic impacts. Evaluate the extent to which negative impacts can be avoided, mitigated, remediated or compensated and positive impacts promoted and sustained.

Describe how the proposal meets and furthers the objectives of relevant legislation, policies, plans and strategies. Itemise the RMPS and EMPCS objectives and comment on how the proposal addresses each of the objectives.

11. References

Provide details of authorities consulted, reference documents and other information sources, using a consistent referencing style.

12. Appendices

Detailed technical information which supports the EIS should be included as appendices. The salient features of the appendices should be included in the main body of the EIS. Technical content of appendices must be consistent with information presented in the EIS itself, unless inconsistencies are carefully explained. The EIS may not be accepted where unexplained inconsistencies exist.

Appendix A: General principles for assessing environmental impacts

This Appendix summarises general principles for assessing environmental impacts in EIS documents prepared in accordance with EMPCA.

General Approach

When assessing environmental impacts in an EIS, the proponent should:

- Present information in a clear, well-structured manner appropriate to the audience of the EIS.
- Avoid duplication.
- Base assessments and evaluations on scientifically supportable, referenced data.
- Describe methodologies used and provide supporting research and information wherever relevant.
- State any scientific assumptions, simplifications, or judgements, and define uncertainties.
- Describe impacts and their mitigation to a level of detail that is proportionate to potential consequences and to what extent they can be controlled.

Impact assessment

Impact assessment involves the identification and characterization of the effects of a proposal. When undertaking impact assessment, the proponent should:

- Explain methodologies used to identify and characterise impacts.
- Clearly state the impacts that are expected to result from the development in terms of the aspect of the proposal involved and the environmental receptor affected.
- Characterise those impacts in terms of:
 - The magnitude of impacts, quantified where possible, including spatial extent and timeframe;
 - The vulnerability of the affected environmental receptors to harm or nuisance;
 - Sources of the impacts and pathways by which the impact may occur;
 - Probability of occurrence (if not 100%);
 - The range of scenarios in which the impact may occur, including plausible worst-case consequences;
 - Reversibility of impacts;
 - Any predicted indirect effects; and
 - Any aspects of other proposals examined cumulatively.
- With reference to the project description and alternatives described in the EIS, state what measures to avoid or reduce impacts have been considered as part of this assessment, and which of these have been incorporated into the proposal.

Impact evaluation

Impact evaluation is the determination of the significance of impacts. Proponents should support conclusions about the significance of impacts using a structured argument that clearly describes the magnitude of the impact, the sensitivity of the affected receptors, and how they relate.

Mitigation and Monitoring

Mitigation (planning and design considerations, pollution control technology and management practices) and monitoring are measures additional to those considered during the impact assessment to reduce the impact of the proposal. In presenting mitigation and monitoring the proponent should:

- Describe the measures proposed;
- Describe how mitigation measures function to avoid or reduce the impacts;

- Explain how measures accord with existing guidance, accepted practice or best practice environmental management as defined in EMPCA;
- Discuss contingencies for the breakdown/malfunction of equipment or processes;
- Describe any anticipated impacts resulting from the mitigation actions and how these will be addressed; and
- Identify where control measures are to be carried out, operated and/or maintained by a third party, and how this will be achieved.

Residual impacts

Residual impacts are those that remain after all proposed avoidance and mitigation measures have been taken into account. When assessing residual impacts, the proponent should:

- Revisit the first evaluation of impact, taking into account the effects of the measures to reduce the magnitude of the impacts and present a revised statement of significance, and
- Where required, identify appropriate actions that will offset impacts, based on the relevant guidelines. Offset actions must present a measurable, relevant and ongoing net benefit which would not otherwise have been realised, and which is not accounted for by any other project or proposal.



ENVIRONMENT PROTECTION AUTHORITY