



OFFSHORE FARMING

- Huon Aquaculture pioneered offshore farming in Tasmania and has been successfully farming in Storm Bay since 2014. A significant amount of research, undertaken over many years, has informed our operations in Storm Bay; one of the roughest aquaculture farming areas in the world.
- During the five-year implementation phase of the Controlled Growth Strategy (2014-19), Huon focused on re-engineering every step in the production processes to enable farming in high-energy sites offshore.
- Prior to commencing farming in Storm Bay, Huon closed down its shallowest inshore sites in the Huon River, to reduce impact on neighbours, improve navigation and safety while reducing environmental impact. In 2014, Trumpeter Bay was Huon's first active offshore lease (one pen of salmon was grown in 1995 as a trial) although this was decommissioned in late 2019 to allow for better separation between the remaining leases.
- Huon operates five farm lease sites in Storm Bay on the eastern side of Bruny Island, located within a Marine Farming Development Plan (MFDP) area. Of the five, we have four active leases, East of Yellow Bluff and four lease areas zoned Storm Bay 1, 2, 3 and 4 (SB1-4). All details about farmed salmon leases are publicly available via <https://maps.thelist.tas.gov.au/listmap/app/list/map>
- With stringent biosecurity principles applied to the farming area, each of our farm leases are positioned to maximise the distance between salmon production zones, thereby reducing the risk of disease transfer between year classes in the MFDP area.

OFFSHORE FARMING

Offshore farming for Huon means that the location must meet certain environmental conditions as well as there being suitable equipment and farming practices to enable farming to be undertaken safely. To be considered an offshore site it must have the right combination of good water flow and wave action (high energy) and coarse sand sediment on the seafloor. A coarse sand seabed is ideal for sustainable salmon farming. The coarser, more mobile sediment under the pens is better oxygenated which means that any nutrient load (organic matter) is broken down more quickly.

The mix of high energy and inorganic coarse sand sediment is only typically found in exposed sites and they are the two factors that we combine to consider an offshore farming site. It's not necessarily about distance from the shore, but rather having the right criteria such as wind, waves, current and suitable sediment type. Overall, this means that offshore sites have less impact on the environment than an inshore site for the same farming activity.

STORM BAY LEASES

Our **East of Yellow Bluff (EoYB)** lease is 260Ha and situated 1.5km offshore. EoYB is regulated by the State Government under Marine Farming Lease Licence 281 and the associated EPA compliance falls under Environmental Licence 10180.



The primary purpose of the EoYB lease is to stock smolt (our younger fish) which are grown to an average weight around 1.5-2kg.

The **SB 1- 4** are four 50Ha leases within a total lease area of 200Ha to the south (toward Cape Queen Elizabeth) sited between 1.2 to 1.8km off Bruny Island. SB zones receive the 1.5-2kg sized fish from EoYB and grow these to harvest. These sites are in deeper water to accommodate the larger 240m pens which are positioned to improve biosecurity through better separation of salmon year-classes.

SB1-4 is regulated by the State Government under Marine Farming Licence 261 to carry out marine farming in State waters and the associated EPA compliance falls under an Environmental Licence.

A very conservative estimate of the area of Storm Bay is 59,860Ha, of which our farming area is 460Ha; less than one per cent.

ENVIRONMENTAL MONITORING

Environmental monitoring in Storm Bay has shown that nutrients are undetectable above background levels at distances greater than 500 metres from fish farm pens (Storm Bay BEMP)

www.epa.tas.gov.au/Documents/MF281%20Yellow%20Bluff%20Annual%20BEMP%20Report%202019-2020.pdf

The nutrients are either diluted by the strong waterflows through the farms and/or are relatively rapidly absorbed by the system in general (e.g., phytoplankton). Huon also undertake on-farm monitoring at each lease site which includes: water temperature, salinity, dissolved oxygen, ambient phytoplankton and zooplankton, net fouling and marine debris. Some of these indicators are publicly available (in real time) on our [Sustainability Dashboard](#).

A suite of approved FRDC research (undertaken by CSIRO and IMAS) is currently underway to continuously inform the expansion in Storm Bay.

This Storm Bay relevant government framework is a localised lease-specific monitoring program developed by the EPA in consultation with the Institute for Marine and Antarctic Studies (IMAS) and Commonwealth Scientific Industry Research Organisation (CSIRO) to monitor key environmental indicators within and adjacent to marine farming lease areas and throughout Storm Bay. This program involves proposal-specific monitoring of water quality and sediment condition geared to production cycles and ongoing broadscale monitoring to assess water quality, sediment condition and reef community structure at intermediate and far-field scales.

The research suite includes:

- Hydrodynamic and biogeochemical modelling and monitoring (led by CSIRO Project 2017-215) which will characterise the system and inform allowable biomass/TPDNO for the Greater Storm Bay area moving forward,
- Decision support tools (led by CSIRO Project 2018-104)
- Observational and monitoring program design, implementation and evaluation (led by IMAS Project 2018-131) which form the framework of the Broadscale Environmental Monitoring Program written into Environmental Licences. Outputs from this will inform development of the Environmental Licences and BEMP requirements moving forward.

In addition to the suite of three projects above there is a large communications and governance project (FRDC Project 2018-103) and all will contribute to scientifically robust information and predictive tools. Status reports on each project can be sourced at www.frdc.com.au/project-search

Also see *Fact Sheet – BEMP* for more information.

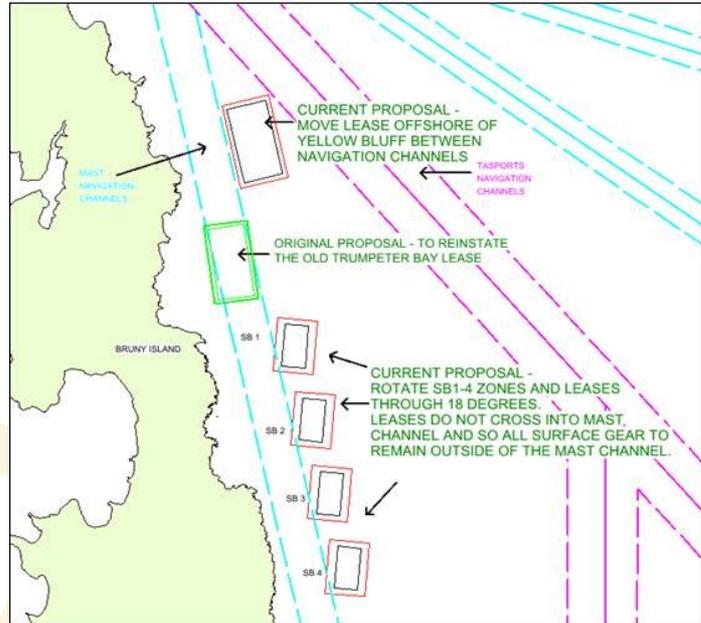


STAKEHOLDER ENGAGEMENT

Huon undertook a range of stakeholder consultation and community engagements over many years to inform the preparation of the East of Yellow Bluff (EoYB) Environmental Impact Statement (EIS) a requirement of the State Government process. Consultation and engagement was undertaken in the context of the company's wider changes to farming, including the use of new technology (such as the wellboat and Fortress Pens) and farming methods that the company's growth is largely predicated on.

The stakeholder engagement program provided opportunities to participate in a range of consultative activities.

An important feature of consultation was the company's active response to the concerns of stakeholders.



This graphic details the proposed changes used during the consultation process.

This is evidenced by the re-positioning of the proposed new zone further offshore (Trumpeter Bay off Storm Bay lease area to new zone east of Yellow Bluff) in direct response to feedback from regulators (MAST and TasPorts), commercial and recreational boating and fishing industry feedback.

Since the preparation of the EIS (over the period 2017 and 2018), Huon also responded to concerns from local residents in relation to visual impacts and subsequently made a further modification to the proposed lease site.

RESEARCH INITIATIVES

Huon along with fellow salmon farmer, Tassal, is partnering with Carnegie Clean Energy, a WA based leading wave energy technology company, and the Blue Economy CRC, on the development of MoorPower™; a CETO derived wave energy product designed for moored vessels, and offers a solution to the challenge of securing clean and reliable energy for offshore aquaculture, reducing the sector's reliance on diesel generation by utilising wave energy, an untapped energy source constantly flowing around offshore facilities.

Over the next two years (launched Oct 2021), Carnegie will design, install and operate a scaled demonstrator just offshore from its office and research facility in North Fremantle, WA. MoorPower™ was developed by Carnegie with the goal of decarbonising the energy needs of offshore operations, particularly in aquaculture. As the aquaculture sector moves operations further offshore, operations such as feeding barges will no longer have access to shore-based power and the reliance on diesel generators comes with many associated costs, carbon emissions and environmental risks, including fuel storage and spillage risks while refuelling offshore.

Carnegie has incorporated aspects of its proprietary core CETO wave energy technology into MoorPower™. The core CETO technology has a submerged buoy that sits a few metres below the surface of the ocean, moving with the waves and currents. This orbital motion drives a Power Take-Off (PTO) system that converts the wave motion into electricity energy. <https://www.carnegiece.com/>

