

THE FUTURE OF FISH FARMING



Huon Aquaculture co-founders Peter and Frances Bender

We are proud salmon farmers and since we established Huon Aquaculture in 1980 our business has grown to become Australia's signature producer of salmon. We're recognised around the world for the quality of our salmon and the ingenuity of our operations.

We are an ethical business, a respected Tasmanian brand, part of a sustainable industry and a company that is focussed on the safety of our employees, the welfare of our fish and the wildlife around our farms.

Right now, we are setting a new standard for salmon farming in Tasmania. It is our view that our move to offshore farming will be a step-change for our industry that benefits the environment and all users of our shared waterways.

You may already know that between 2014 and 2015 Huon completely changed the way we farm. We replaced every single mooring and pen on every lease, we changed the way we feed our fish and we changed the way our teams on the farm work together. We acquired the Ronja Huon (the first ship of her kind anywhere in the world), a well-boat that bathes our fish in freshwater to keep them healthy. We closed down our shallowest inshore sites in the Huon River and moved our remaining sites into deeper, higher energy areas, including our sites in Storm Bay, to reduce our impact on neighbours and improve navigation and safety whilst reducing our environmental impact.

Our new pens are a world first that bring together our three decades of farming knowledge and the newest technology available. We call them Fortress Pens because the nets are made of a material much like that used to make bullet proof vests, they are double netted to keep seals out and our fish in, and the pens are built to be flexible so they ride the swell and withstand the punishing offshore weather. They are much safer for our farm hands to work on and the simplicity of their design has drastically reduced the potential for marine debris to come from them.

We are using the best available technology like Fortress Pens and the well-boat, so we can farm offshore safely. That is the key: keep our people safe, keep our fish safe, and keep the waterways natural inhabitants – like seals – safe, while keeping the environment healthy.

The six principles that continue to guide our planning are:

1. Increasing production responsibly and safely
2. Improving the health and welfare of our fish
3. Improving safety for our workers
4. Reducing our environmental footprint
5. Continuing to positively participate in the community
6. Producing world-class salmon products in Tasmania

As we continue to pioneer offshore farming in Tasmania we wanted to share with you our plans and how we believe we can achieve them.

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OFFSHORE FARMING – THE NEW NORMAL

Huon Aquaculture has pioneered offshore farming in Tasmania. But what is offshore farming exactly? Offshore farming for Huon means that the location must meet certain environmental conditions and that the equipment and farming practices enable farming to be undertaken safely.

Location of sites:

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.

High energy

A combination of fast water movement and wave action (regularly greater than 4m) equates to a high energy site. This results in more oxygen availability and quicker flushing of carbon dioxide and ammonia which is much better for the fish. The higher energy of the water movement also reduces any impacts on the sediment and water column.

Sediment

A coarse sand seabed is ideal for safe and 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.

How do we find new potential offshore sites?

We use the best available environmental and meteorological information by undertaking joint projects with the Bureau of Meteorology to understand long-term wave and wind patterns in a variety of different locations. This is then cross-referenced by Huon with seafloor surveys and continuous in-situ monitoring over extended periods of time to assess wave and current information as we narrow the range of prospective lease locations.



Best available technology to support safe farming in offshore sites

To farm safely offshore you must have confidence that you can; take care of stock safely, keep them in one place, keep your equipment in one place and protect the local wildlife.

HUON COMBINES THE BEST AVAILABLE TECHNOLOGY



The Ronja Huon Well-Boat

WELL-BOAT

State of the art vessel for bathing fish in freshwater, transporting fish to harvest and smolt (juvenile salmon) to sea.

Reduced stress on fish during freshwater bathing: The well-boat makes the process of bathing and transporting fish far less stressful, thus improving their welfare.

Improved safety for workers: It provides a safer working platform for workers undertaking bathing operations during adverse weather.

Reduced community impact: It undertakes a range of functions and means that we have almost eliminated towing of pens and reduced the need for higher numbers of smaller, noisier vessels to be moving around the waterways.

Reduced freshwater use: The Ronja Huon re-uses freshwater at least four times compared to single use for traditional bathing methods.

Improved biosecurity: By transporting all fish in an enclosed system that can be sterilised, the potential for disease transfer is reduced.

MOORINGS

New heavy duty moorings support the new Fortress Pens.

Safer and more secure moorings: Allows the pens to be moored safely in higher energy sites.

FEEDING TECHNOLOGY

We have developed next generation pellet recognition video technology which has been rolled out across our feed barge. The pellet recognition video technology enables us to monitor high quality video and continuous sensor information from across all of our pens. Due to a lack of suitable technology in the market Huon has developed and is now implementing cutting edge Wi-Fi technology which is able to connect network sensors over long distances on our offshore leases.

Improved health and welfare of fish: All fish can be fed at the same time and watched remotely using the new system to identify any signs of stress or disease.

Reduced impact on the environment: We can feed fish strictly to appetite with reduced potential for feed to fall to the seafloor.

Improved safety for workers: Remote operation of the system means staff can monitor fish and feed without risk during extreme weather.

FORTRESS PENS

240m circumference double-netted pens that are the biggest in the world.

Wildlife safety: Seals are prevented from entering the pens which means that they are unable to become trapped. The double-netted design and material discourages birds from resting on the pens and prevents them from accessing fish feed, reducing the likelihood of bird entanglements.

Reduced environmental impact: Waste from the fish in the larger pens is dispersed over a bigger area and the natural biota can then digest any waste as it is generated making it easier for the environment to naturally "process" it.

Employee safety: The flat, enclosed walkway of the new pens provides a safer and more stable work platform for farm workers particularly in bad weather. Seals are also unable to access the walkways, reducing the likelihood of aggressive seals interacting with employees.

Marine debris: The new pens cope well with extreme weather which means that debris caused by weather is minimised.

IN-SITU NET CLEANING

Reduced potential for marine debris: Nets are not typically removed from pens for cleaning which in turn reduces the opportunity for marine debris to be created, additionally, less rope used in the new pen design reduces potential for rope to be lost from the pen.

Improved health and welfare: In-situ cleaning enables more regular cleaning of nets which improves water flow and reduces stress on the fish.

HUON'S FUTURE GROWTH PLANS

Huon's growth strategy meets our long-standing commitment to innovation and subsequently the evolution of the Company's marine farming operations and management.

A key driver for Huon's success has been its ability to satisfy domestic market demand. Around 90% of Huon's salmon is sold in Australia, however over 70% of all seafood consumed in Australia is imported. If we are unable to keep up with demand for salmon in Australia we risk seeing imports replacing Australian production. To help Huon meet Australian demand for our

salmon, we need to grow at around 10% per year. That means our existing leases will reach capacity in around 2020. Huon's planning cycle is a minimum of five years. That means we have to identify, source, or build the resources we need five years in advance of any fish being put to sea. To put that in perspective, between 2014 – 2016 Huon invested \$200 million in its farming and production infrastructure to meet its growth projections to 2020. We are now planning the next phase of growth and that is determined by the amount of lease space and growth potential we have available.

WHAT DOES HUON CONSIDER WHEN IDENTIFYING POTENTIAL NEW LEASE SITES?

Huon takes in a range of considerations when identifying proposed new sites suitable for salmon farming.

Huon is of the view that Tasmania is naturally constrained in terms of locations for potential new sites. For us and the way we farm, we consider that the North West and North East coasts are too warm, that the West Coast is too rough and sensitive (bordering a World Heritage Area (WHA) with limited access or local employee base to draw from), Macquarie Harbour is at capacity and the East Coast to be unsuitable for Huon's current farming practices. In addition, Huon does not see that there is potential to further expand in the Huon and Channel. That leaves a relatively small region in the South East of the State. Specifically Storm Bay and further south. As a result, Huon is currently seeking an additional lease in Storm Bay near to our existing sites in the area.

WHY HAVE WE CHOSEN THAT SITE SPECIFICALLY?

We have considered the proposed site against our considerations as shown below and believe it balances the needs of all waterway users, our environment, as community amenity as well as serviceability of the site.

1. Other waterway users including navigational safety

The proposed site allows for straight line navigation up the eastern side of Bruny Island. This is particularly important during inclement weather.

2. Community amenity

The proposed site is largely away from residents and will be serviced by the Ronja Huon, the Company's well-boat, which will keep boat traffic to a minimum. The low profile pens and feed barge will also reduce the visual appearance of the new site.

3. Suitable environmental conditions for optimal fish growth and health

The high energy site and deep waters make this an ideal growing site.

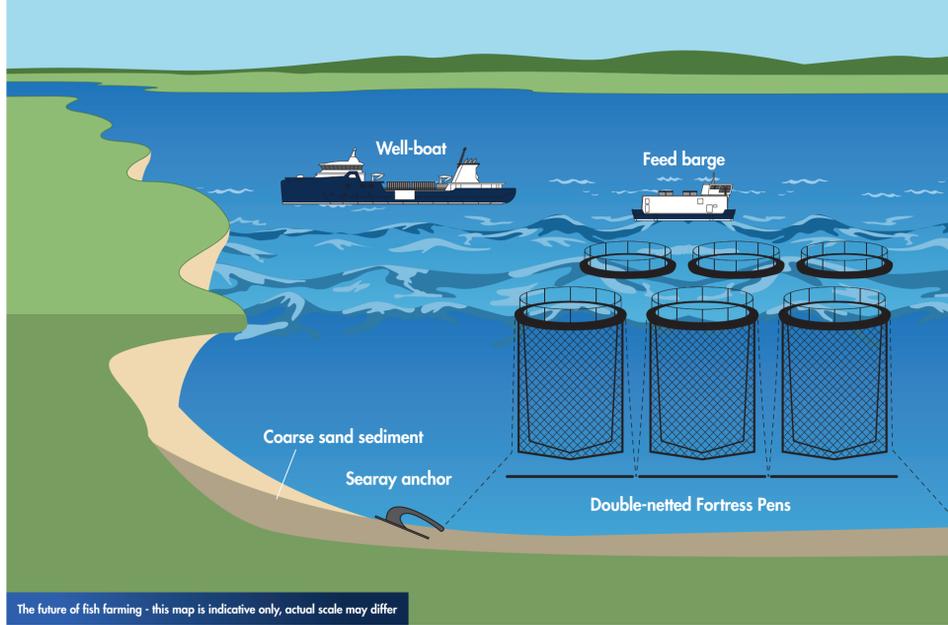
4. Current available science for best environmental management

In selecting the proposed site, Huon has ensured that it is at least "two tidal excursions" away from Tassal's proposed "West of Wedge" sites. This equates to a minimum distance of 10km in Storm Bay. This is to ensure appropriate biosecurity controls are in place between the two Companies. It is Huon's view that when establishing new sites, that a minimum of "two tidal excursions" is set between companies. This is world's best practice.

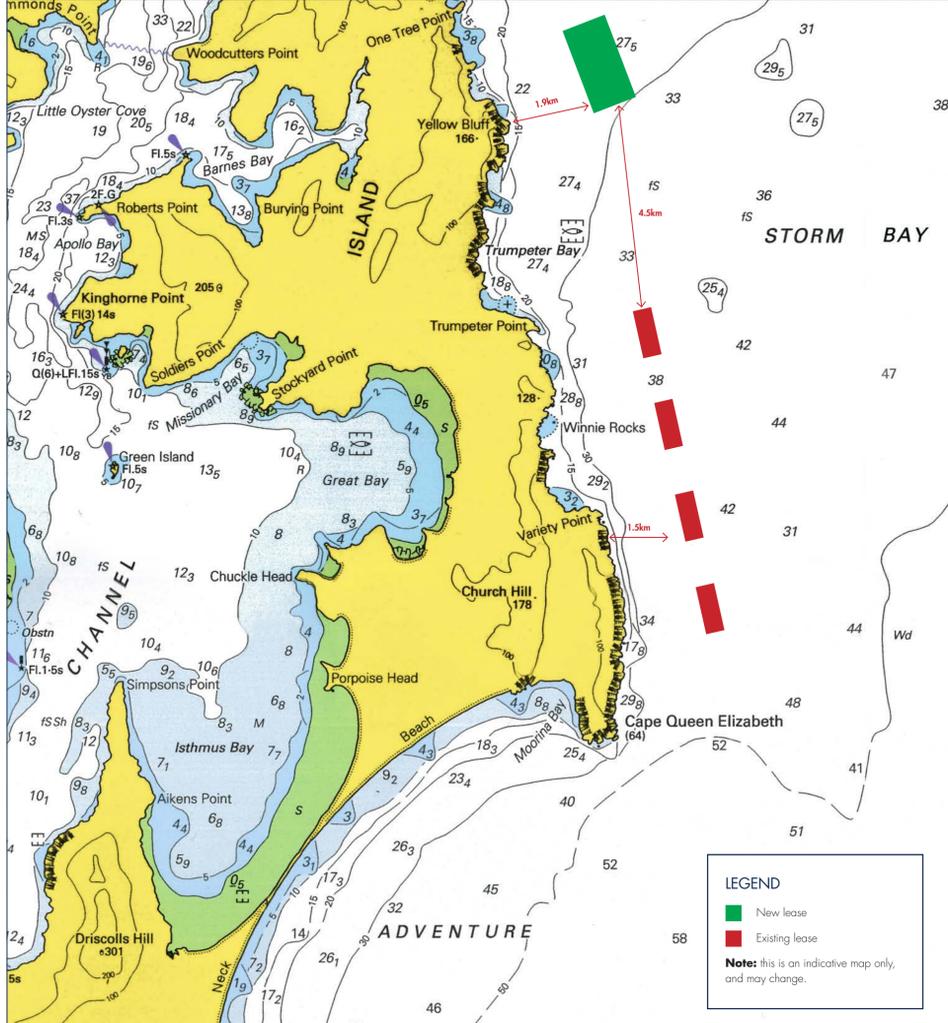
5. Ability to service the site

Huon will need to increase the scale of its shore-based facilities at a suitable location that is able to service the site.

A new site will allow the Company to farm using the best available and proven offshore technologies that it has pioneered in recent years.



The future of fish farming - this map is indicative only, actual scale may differ



REDUCING ENVIRONMENTAL FOOTPRINT

Operating responsibly within our environment is paramount to the success of Huon. Our fish are the best indicator of environmental health and if we fail to respect this, then we won't be able to grow superior and safer salmon.

An independent Institute of Marine and Antarctic Studies (IMAS) broadscale environmental monitoring program report recently found that our farms in the Huon and Channel are having "no significant or adverse environmental effects [on] the water quality or sediments" – Colin Buxton, IMAS Director.

However, new technology and improved understanding of the marine environment means that we are placing new lease locations in more environmentally appropriate, offshore sites.

The new technology and farming methods we are now using deliver direct and tangible environmental benefits:

Freshwater use: Annual freshwater use has halved by 50% from 2,204 mega litres to 1,100 since 2014 and is expected to reduce further largely due to the use of the Ronja Huon.

Wildlife interactions: Since the introduction of the new Fortress Pens we have seen a dramatic decline in all seal interactions. As a result of the net material and double net system we have, in effect, "tough" the seals that they are unable to obtain salmon from our farms.

Marine debris: All large equipment will be GPS tagged to ensure that if it comes loose in severe weather it can be rapidly recovered. The new pen design means that pens are no longer towed and has low rope use meaning there is significantly less potential for rope debris to come from the farm.

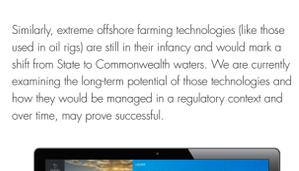
What about new technologies like onshore farming?

Huon Aquaculture continuously looks for and develops new technologies and systems to improve the safety and sustainability of its operations. We are monitoring the development of new offshore technology and the potential for onshore farming.

Huon does not consider the technology for onshore farming as it stands today to be at a level to be considered sustainable. Specifically, the stocking densities of harvest-size fish in onshore farm facilities is extremely high and we believe this is an unacceptable compromise of fish welfare.

They have very high power requirements and use huge volumes of concrete to build. In addition, if onshore farming became viable then it is likely that it would be moved closer to the market for salmon (somewhere on mainland Australia).

However, Huon is currently watching the development of the system and technology closely.



Across a whole range of measures, Huon is now seeing the benefits of the investment in best available technology, science and farming practices.

We encourage you to visit our Sustainability Dashboard at dashboard.huonaqua.com.au

For more, visit huonaqua.com.au

