

Triabunna Community Information Session

18th April 2018



The Farm

- Lease established with a x10 pen bay mooring system in July/August 2017, a feed barge and pen systems.
- 17YC Smolt inputted to sea in late August and September
- Transported from hatchery via trucks onto our heavy works vessel and delivered direct into x4 168m sanctuary pens
- Smolt input successful with low mortality and strong feed rates.



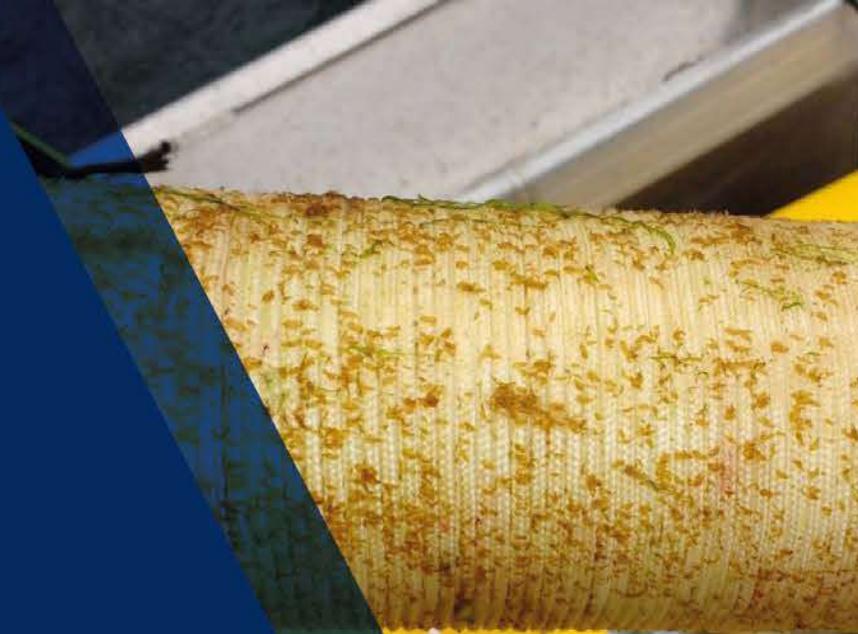
The Farm (cont.)

- Fish have performed well and are currently 1.7 kg average.
- Environmental conditions have been favourable, with both temperature and oxygen levels in the parameters we were expecting.
- The fish have had their initial split (reduce biomass and allow for on-growing), we currently have x8 stocked pens.
- We will be installing the second mooring system in May, this will have 18 pen bays.
- A further x7 new pens will be towed from Dover to complete the 17YC splits in June.
- In late July x8 pens will be towed from Dover in preparation for the 18YC smolt intake in late August.
- At full stocking numbers, we will have x22 stocked pens.
- This number will reduce as we start to harvest in December, at completion of harvest in January 2019 we will be down to x8 stocked pens
- Our Fish will be 5.5kg at harvest and will take approx. 35 days to harvest the 17YC completely.
- Harvesting is done with a harvest vessel and will occur in daylight hours, on average we will harvest 80T of fish per day.
- Transport process for harvested fish is still being determined, we will update on this at the next community session.
- We have leased Paddy's Point site to provide us with a shore base for our operations.



Eco Aquaculture

- We are currently trialling seaweed on our Okehampton, Port Arthur, Nubeena and Dover leases
- Trialling three different species *Macrocystis*, *Lessonia* and *Ecklonia* species
- *Macrocystis* is proving to be the most successful, this is the giant kelp species in decline on the east coast of Tasmania.
- We are also involved in attempting to re-establish kelp beds off the Tasman Peninsula in conjunction with Eaglehawk Dive Centre. The picture at the top 'is of a kelp plant grown from seed in Pirates Bay of the Lufra. Planted Nov16, picture taken Nov17.
- Trialling temperature tolerant species of *Macrocystis*, IMAS trials.



Our People

- We currently have x22 people working on the Okehampton farm
- All are full time employees
- Future employment will be a further x 7 people
- This will take us to a total number of x 29 people

Where do our Okehampton team live?

Triabunna
13 FTE

Orford
1 FTE

Buckland
1 FTE

South
Hobart
1 FTE

Swansea
2 FTE

Spring Beach
1 FTE

Little Swan Pt
3 FTE



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Our Equipment

- We purchased four vessels from St Helens to support our operations.
- These vessels were constructed in St Helens by Lyndcraft Boats.
- Our heavy works vessel we lease and was also built by Lyndcraft Boats.
- Our feed barge was constructed in Tasmania by Hayward's.
- Our bathing barge was constructed in Tasmania by Hayward's.
- Our mooring system constructed in Tasmania by Sea farms.
- Our pens constructed in Tasmania by Mitchell's Plastic Welding.
- Our nets supplied by Tasmanian company Nets Tas.
- Total spend supporting Tasmanian businesses- \$11.4 million for start up of Okehampton lease.



Why do we need fresh water?

- AGD is caused by the microscopic protozoan, amoeba species *Neoparamoeba perurans*. The amoeba occurs naturally in the ocean, and attaches to Atlantic salmon's gills causing a condition called amoebic gill disease.
- Juvenile salmon, especially those in their first year out to sea, are particularly susceptible to the disease. This is one reason why we are focusing on raising bigger big on land before they are transferred to sea (we currently raise fish to 400g+ on land and aim to increase this size with each generation).
- Increased water temperatures increase the AGD infection.

What happens if we don't treat for AGD?

- The amoeba will develop on the gills and reduce the ability of the fish to intake oxygen and release carbon dioxide. Initially it can result in reduced feeding and reduced growth. If left untreated will result in fish death, as the fish would suffocate.



How do we treat for AGD?

- The amoeba can be dislodged from the gills by treating the fish with fresh water. In the wild salmon affected by AGD would swim into brackish water to kill it, as our farmed fish are unable to do this, we give them a bath. Basically we place a liner at the side of the pen, fill it with fresh water and provide oxygen, fish are then moved into the liner, they stay there for a minimum of two hours, which is effective in treating the AGD, and fish are then released back into the pen.
- We determine when the fish need to be bathed by performing gill checks on our fish. This occurs every 14-21 days. We track the level of AGD infection, which then allows us to plan the bathing regime required.
- The number of bathes required is reducing each year class of salmon, this is due to the selective breeding program. Our brood stock are selected for both AGD resistance and growth traits.



Fresh water is sourced from our reverse osmosis plant and pumped into holding liners.



AGD & Fresh Water (cont.)

- All of our fish have now had x3 bathes.
- We expect they will need a further x4 bathes until they are harvested.
- We had some challenges in January due to the high energy nature of the site and increasing AGD infection.
- Our liners that hold the fresh water were not withstanding the conditions, and subsequently salt water was entering the liners. Making the water ineffective for treatment of AGD.
- At the same time we were needing to perform maintenance on the RO plant.
- Unfortunately we had elevated mortality due to AGD and lack of available fresh water to bathe them.
- Our team worked extremely hard to respond to the situation.
- We towed water from Nubeena to enable the bathes.
- We also utilised Tas water for a very short period.
- We have changed our processes to ensure this does not occur again.



Shoreline Clean-Ups

- We have completed two clean-ups , one in September and one this month
- Due to bird nesting from October to March we were unable to do over that period.
- We are engaging bird specialists to provide more information on bird nesting in the area to see if we can increase our ability to conduct more scheduled clean-ups.



Environmental Monitoring

- Environmental Monitoring at Okehampton (and surrounding areas) commenced in August 2014
- 45 consecutive monthly sampling events at 5 (now 7) monitoring stations
- Ecological reef assessments (26 sites in SE Tas) commenced in July 2015
- Environmental baseline survey undertaken May/June 2017
- Reef Monitoring (Okehampton specific) undertaken in April 2018



Broadscale Monitoring Program

- Commenced as voluntary program by Tassal – ASC and environmental characterisation
- Now regulatory requirement (as of August 2017)
- 7 Monitoring and sampling stations
- Water quality monitored monthly (nutrients, physical parameters and microalgae)
- Sediments monitored annually - sediment chemistry (redox, sulphides) and biology (benthic infauna)



Broadscale Monitoring Sites

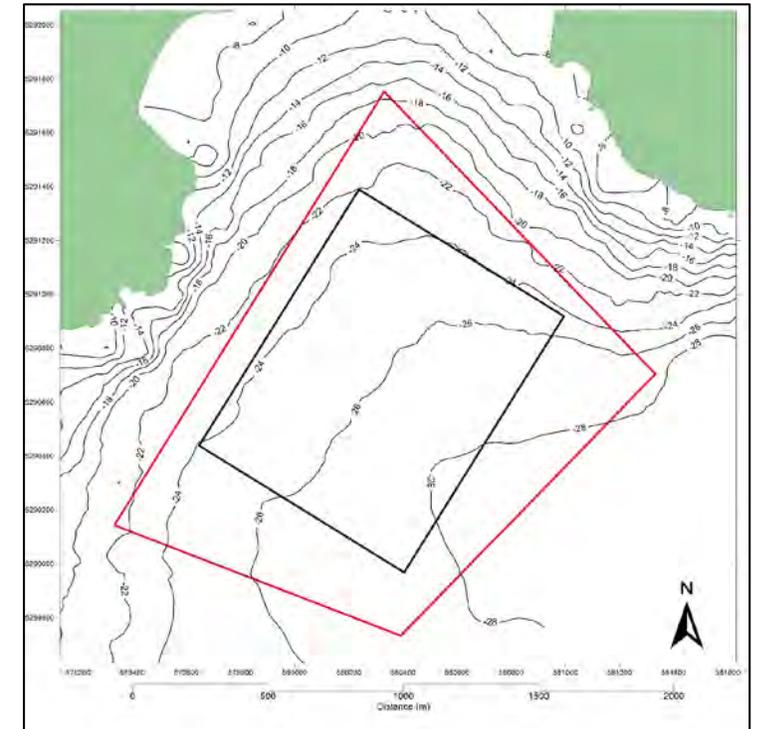
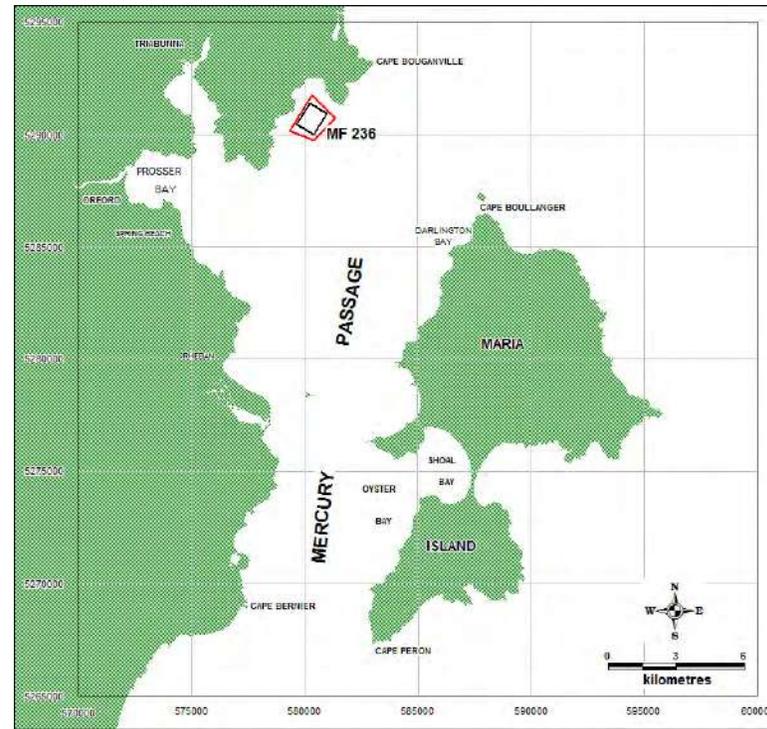
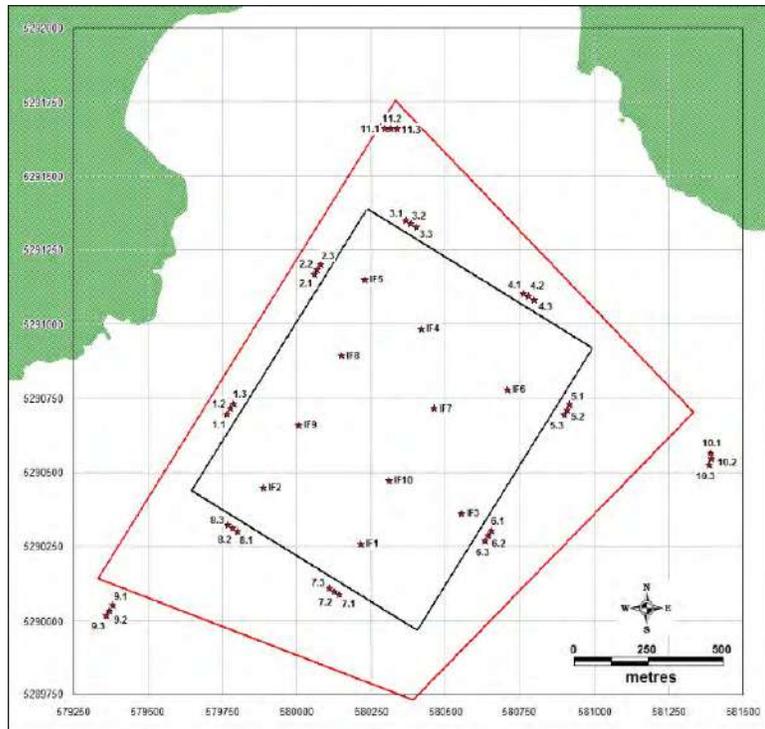


Environmental Baseline Survey

- EBS Report submitted to EPA in July 2017 (see www.epa.tas.gov.au/regulation/salmon-aquaculture/Okehampton)
- Report includes information on:
 - Current flow
 - Bathymetry
 - Seabed characteristics and habitat profile
 - Underwater video survey
 - Sediment chemistry (particle size, organic carbon, heavy metals, redox, sulphides)
 - Biological analysis and threatened species



Environmental Baseline Survey



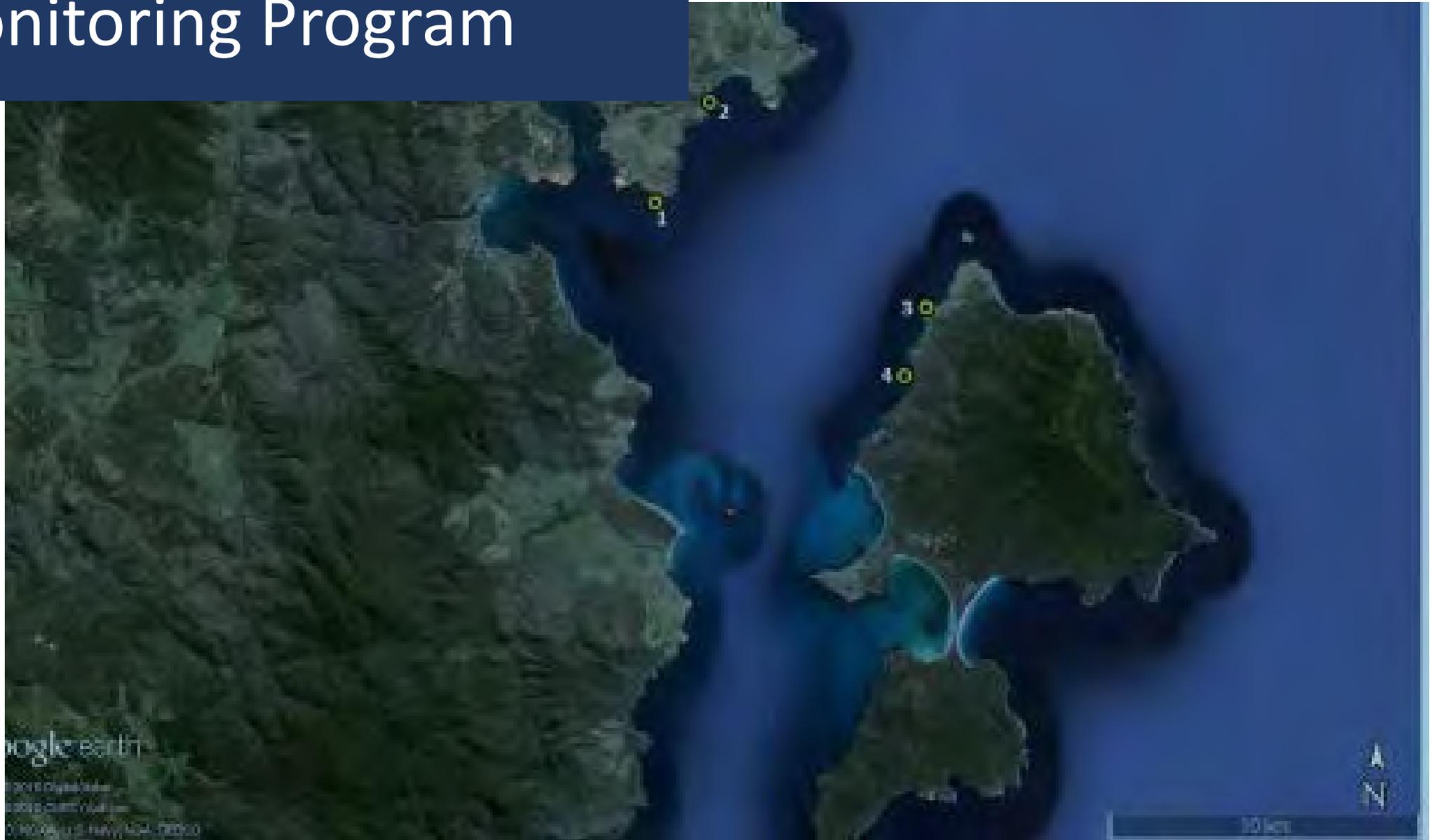
Reef Monitoring Program

- FRDC Project commenced July 2015
- Established 26 reef monitoring sites from Maria Is. to Actaeon Is.
- Analysed data (24 consecutive surveys) for Ninepin Pt, Tinderbox and Maria Is MPAs)
- Characterised reef communities based on macroalgal (seaweed) assemblages
- Study found no consistent evidence of changes in macroalgal assemblages attributable to salmonid farming
- Regional variation – mostly driven by complex interplay between physical and biological factors – level of exposure and depth are important drivers

Understanding broad scale impacts of salmonid farming on rocky reef communities



Reef Monitoring Program



Reef Monitoring Sites - Baseline



Reef Monitoring Surveys



EPBC Issues

- EPBC Referral Decision – made on 1 August 2017
- Decision - Not a controlled action – but subject to additional mitigation measures
- Particular focus on mitigation measures to avoid any significant impacts to Southern Right Whales
- Farm management measures – reduce risk of entanglement and vessel collisions
 - vessel activities (i.e. speed/sonars), routine inspections of gear, shut-down procedures, observer training
- Particular focus on mitigation measures to avoid any interactions with Southern Right Whales



Community Partnerships

Tassal has a dedicated Community Foundation and assesses requests for sponsorships and donations against its core community pillars (health & wellbeing; environment, education and social inclusion). We have supported to date:

- Spring bay Target
- Triabunna Roos Football Club
- Triabunna Roos Junior Football Club
- S-E Suns Women's Football Club Triabunna
- Triabunna District School
- Swansea Bowls Club
- Glamorgan Spring Bay Art Prize Small sculpture award
- Coles Bay Half Triathlon
- Orford Primary School Fair
- Swansea Country Fair
- Spring Bay Rotary Fish Fry
- Triabunna Footy Club "Good Friday Fish Fry"
- Orford Community Cuppa for Cancer



Transparency

- Tassal awarded in 2017 #2 in the world for transparency of sustainability reporting. #1 in 2016 and #3 in 2015 (seafoodintel.com)
- Transparency brings scrutiny, however also drives improvement
- Our new interactive site-by-site dashboard, launched 2018
- Our new “Tassal Group” website has under-pen footage taken via an ROV camera from our leases
- All interactive, 3D videos from our partnership with Primary Education Industry Foundation Australia (PIEFA) are available to view online via our “Tassal Group” website or by downloading the FarmVR app
- ASC audit for Okehampton site is scheduled for the third week in July, 2018

Dashboard: <http://dashboard.tassalgroup.com.au/>

Tassal Group: <http://tassalgroup.com.au/> (go to Community > Learning Resources)

