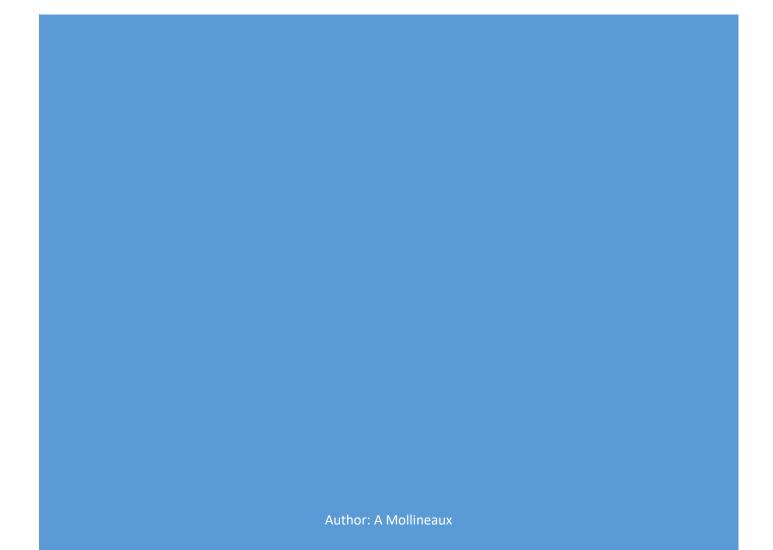
SUBMISSION TO THE LEGISLATIVE COUNCIL INQUIRY INTO FINFISH FARMING IN TASMANIA



Contents

Introduction
Background & Timeline of Events
Figure 1: Site of fin-fish farm from open sea3
Figure 2: Pens as viewed from Google Maps3
1980's - 2006
2006 - 2017
2017 – Present Day
Issue 1: Lack of Consultation
Figure 3: View of fish pens – 30 July 20176
Issue 2: Loss of Amenity7
Figure 4: DPIPWE definition of marine leases at Long Bay7
No-Go Zones9
Figure 5: Map of Long Bay lease zones10
Issue 3: The Changing Environment in Long and Stingaree Bays11
Photographs of the Change in Stingaree Bay: November 2011 vs November 201912
Figure 6: Stingaree Bay (25 November 2011)12
Figure 7: Stingaree Bay (11 November 2019)12
Figure 8: Long Bay (21 November 2019)13
Issue 4: No New Approvals Required to Recommence Fin-fish Farming Operations14
Issue 5: The lack of Independent Oversight or Monitoring15
Figure 9: Monitoring Sites for Long Bay Lease15
Figure 10: Image portraying fish farm site and location of Algal Blooms / seagrass degradation17
Issue 6: Negative Impact to Tourism Operations18
Issue 7: Loopholes19
Conclusion & Recommendations

Introduction

I will state from the outset that I am not anti-fish farming per se, but I strongly believe that such industries should be correctly sited in locations where such operations do not have an adverse impact to:

- the environment
- the natural beauty of a location, and
- the peace and enjoyment of others, including residents neighbouring fish farms

Unlike land based agriculture, the impacts of aquaculture and fin-fish farming are not contained within a boundary of a lease or the area 'controlled' by operators. The negative effects and unintended impacts of fin-fish farming spread far beyond the lease into waters which constitute public space. Culminating with these factors, is the negative impact fish farming operations and their unintended consequences have on competing industries, such as tourism, and Tasmania's "clean, green" image.

I believe there are several issues and serious flaws with the current practices and regulations of the fin-fish aquaculture industry within Tasmania. These flaws invite conflicts of interest and present a serious risk of unethical practices by operators through the lack of effective monitoring and oversight by an independent government authority such as the Environmental Protection Agency (EPA).

Using the example of TASSAL's fin-fish operations at Long Bay, Port Arthur, I wish to highlight what I believe are the issues and flaws with the current system; how the absence of a proper system of checks and balances, including monitoring and oversight, enabled fin-fish farming to become established and then expand greatly in an area that is environmentally unsuitable. How fin-fish farming has contributed to accelerated environmental degradation of Long and Stingaree Bays, how individual or collective concerns are dismissed, how public amenity is lost and how the major economy of the area (tourism) is impacted.

Background & Timeline of Events

The Long Bay fin-fish farm operated by TASSAL is situated approximately 10 km from the open waters of the Tasman Sea and sits in a 500m gap between Evendens Point and Garden Point, occupying approximately half of this relatively narrow channel.



Figure 1: Site of fin-fish farm from open sea

Figure 2: Pens as viewed from Google Maps



1980's - 2006

The lease on this site was originally granted in the 1980's – a time when proper oversight, proper consideration, and full and proper environmental impact studies took a back seat to a developer with proposal for a new industry that would supposedly provide employment opportunities and economic returns to a struggling community with high unemployment.

To the best of my knowledge there was no independent environmental impact study undertaken, no baseline testing conducted and no suitability assessment performed of the viability of Long Bay to sustain fin-fish farming. This was a relatively isolated and quiet little bay, home to a few permanent residents and shack owners tucked alongside a large nature reserve and national park. A protest group of local residents from Long and Stingaree Bays, shack owners and other concerned citizens was formed, but despite their best efforts the lease was granted and operations commenced.

A few years later, in 1993, the lease holder made application to triple the size of the lease. This was rejected by the then minister, Mr R Groom MHA, but was subsequently granted on appeal. As part of the appeal, the applicant, Mr P Ranicar of Tasmanian Smokehouse Pty Ltd outlined the reasons for the expansion in his Proof of Evidence.

At para 23 (page 7):

"The fish are held in floating cages. Fish waste and uneaten food particles drop to the sea bed beneath these cages. It is now understood that it is essential to have sufficient room to move the sea cages around within the sea lease areas, to enable the sea bed to be left fallow. Fallowing allows the sea floor time to recover by the ordinary process of the sea and the prevailing currents flushing out the sea bed. It is generally accepted in the industry that the sea bed will recover completely from the waste on the sea floor in a period of between six and nine months...Further, because of fallowing, there is less of a likelihood that nutrients will build up in the water and create algal blooms."

What started as a relatively small operation in the 1980's then expanded with the number of pens increasing through the 1990's and as the years went on and the operation intensified, the adverse impacts of the fish farm and its operations to the water quality in Long and Stingaree Bays became ever more evident.

Despite Mr Ranicar's claims and assertions, algal blooms became a common occurrence in both Long and Stingaree Bays once fish-farming operations were commenced. The offensive smell at low tide, the "chummy" water, the outbreak of a brown furry growth over the natural seagrass, a bright green slime over the rocks of the foreshore and a proliferation of filamentous green alga floating on mass on the surface of the water became the norm. Had proper testing and assessment been undertaken in the 1980's when the lease was first applied for, I am confident that the results would have sounded alarm bells to any reasonable minded person. Any long term resident or shack owner on these bays would have pointed out that the sheltered and shallow nature of Long and Stingaree Bays, the relatively static tidal movements for the majority of the year and the lack of any real current per se all are unsuitable to sustain fin-fish farming.

From then on, it was not worth complaining. Complaints and protests fell on deaf ears; no one within government departments appeared interested in listening, let alone make an effort to come and see first-hand what our concerns were and what was actually occurring in Long and Stingaree Bays.

People who did voice their concerns had a label of "whinger" "greenie" "NIMBY" "antidevelopment" or "anti-jobs" applied and any dissent was simply dismissed. Both Long and Stingaree Bays suffered dreadfully, what were once pristine and clear waters now resembled areas such as Orielton Lagoon; nutrient rich saturated environments where the natural ecosystem was choking and dying.

I am informed TASSAL obtained ownership of the lease from Tasmanian Smokehouse Pty Ltd in 1994 and operations continued, as did the deterioration of Long and Stingaree Bays, until suddenly in 2006 operations ceased practically overnight.

2006 - 2017

In the 11 years that followed the cessation of operations, Long and Stingaree Bays slowly began to recover and return to something that resembled their former pre-farming operations status. The water began to clear, the brown furry growth over the natural seagrass began to disappear, the outbreaks of filamentous green alga dramatically reduced; observers could begin to once again see the sea floor. That was until fin-fish farming recommenced in 2017.

2017 – Present Day

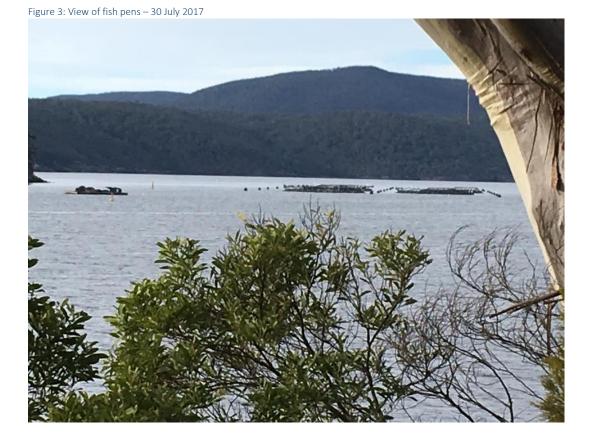
In July 2017, while all of the public focus, outrage and protest were on TASSAL's plans for a fin-fish farm at Okehampton Bay, TASSAL quietly recommenced operations of the Long Bay fin-fish farm, with plans to expand the operation. Incredibly, despite having laid fallow for nearly 11 years, there was no requirement for TASSAL to seek approvals to resume fin-fish farming in this location.

To the best of my knowledge there was once again no <u>independent</u> baseline testing directly conducted by a regulatory authority such as the EPA in 2017 prior to the re-commencement of operations to establish what the health of Long and Stingaree Bays at that time; operations simply commenced.

Issue 1: Lack of Consultation

Whilst there may have been some consultation with commercial interests and tourist operators surrounding the lease, there was no consultation with private landholders neighbouring the lease; at least this was the experience of my family. We literally discovered one day in July 2017 that the pens, boats and barges were back and the lease area had now taken half of the entrance to Long Bay, some 250 metres, between Evendens Point and Garden Point at the beginning of Long Bay.

Long term residents of these bays are the only real source of information regarding the detriments both bays have suffered. However residents of Long and Stingaree Bays are few in number and their concerns are repeatedly swept aside by TASSAL through the use of statements such as "community support" and "stakeholder consultation."



Issue 2: Loss of Amenity

According to the *Tasmania Peninsula and Norfolk Bay Marine Farming Development Plan September* 2018, (pp27-28) produced by the DPIPWE, Long Bay is divided into two zones; zones 15A and 15B, comprising some 32 hectares of leasehold. The following outlines the dimensions of leases at Long Bay as outlined in that report:

Figure 4: DPIPWE definition	of marine leases at Long Bay	

Marine Farming Development Plan Ta	sman Peninsula & Norfolk Bay
------------------------------------	------------------------------

Zone I5A - (at Long Bay)

2.24.1 Location

Zone 15A is located in the northern section of Long Bay and is approximately 90 metres from the coastline at its closest point.

Map 2.13 depicts Zone 15A.

Zone 15A consists of all that area bounded by a line being from points defined by AMG coordinates:

Zone	Easting	Northing	Latitude	Longitude	
15A-1	E569742.00	N5225470.00	43°7.20864'S	147°51.4385'E	thence to
15A-2	E569948.06	N5224697.63	43°7.62474'S	147°51.5964'E	thence to
15A-3	E570164.84	N5224756.81	43°7.59156'S	147°51.7558'E	thence to
15A-4	E569958.57	N5225529.65	43°7.17522'S	147°51.5978'E	thence to
15A-1	E569742.00	N5225470.00	43°7.20864'S	147°51.4385'E	

Australian Mapping Grid Zone 55 Co-ordinates

2.24.2 Zone Area

The area of Zone 15A is approximately 17.95 hectares.

2.24.3 Maximum Leasable Area

The maximum leasable area within Zone 15A is 17.26 hectares.

2.24.4 Categories of Fish

The categories of fish permitted for culture within Zone 15A, subject to the provisions of a marine farming licence, are shellfish and seaweeds.

2.24.5 Management Controls

The management controls applying to Zone I5A are stipulated in Section 3 of this Plan.

Zone 15B - (at Long Bay)

2.25.1 Location

Zone 15B is located in Long Bay and is approximately 45 metres from the coastline at its closest point.

Map 2.13 depicts Zone 15B.

Zone 15B consists of all that area bounded by a line being from points defined by AMGZ coordinates:

Zone	Easting	Northing	Latitude	Longitude	
15B-1	E570098.20	N5224552.20	43°7.7025'S	147°51.7082'E	thence to
15B-2	E570286.17	N5224600.19	43°7.6755'S	147°51.8465 'E	thence to
15B-3	E570387.78	N5224239.31	43°7.8699'S	147°51.9242'E	thence to
15B-4	E570759.63	N5223786.31	43°8.11254'S	147°52.2019'E	thence to
15B-5	E570563.35	N5223582.96	43°8.22348'S	147°52.0587'E	thence to
15B-6	E570194.89	N5224079.03	43°7.95756'S	147°51.7831'E	thence to
15B-1	E570098.20	N5224552.20	43°7.7025'S	147°51.7082'E	

Zone 55 Co-ordinates

2.25.2 Zone Area

The area of Zone 15B is approximately 24.91 hectares.

2.25.3 Maximum Leasable Area

The maximum leasable area within Zone 15B is 15.01 hectares.

2.25.4 Categories of Fish

The categories of fish permitted for culture within Zone 15B, subject to the provisions of a marine farming licence, are finfish, shellfish and seaweeds.

2.25.5 Management Controls

The management controls applying to Zone 15B are stipulated in Section 3 of this Plan.

Tasmania Peninsula and Norfolk Bay Marine Farming Development Plan September 2018 (pp 27-28) https://dpipwe.tas.gov.au/Documents/Tasman%20Peninsula%20and%20Norfolk%20Bay%20MFDP%20September%20201 8.pdf (accessed 27 November 2019)

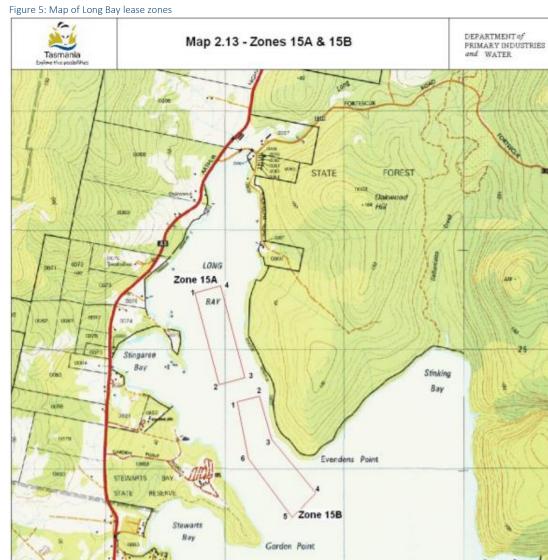
No-Go Zones

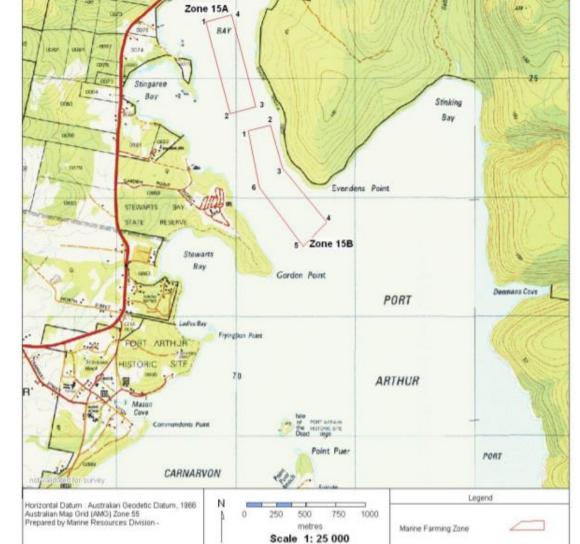
32 hectares of what was once public space in Long Bay, which contained good fishing and diving spots available to all users, has now become the exclusive domain of private enterprises. To move 'too close for comfort' to the TASSAL lease at Zone 15B (refer <u>figure 5</u>) in a boat or kayak, particularly in the 45 metre gap between the shoreline and the lease, can evoke a belligerent response from staff at the fin-fish farm.

There are a number of pipes, ropes and other items of infrastructure stretching between the shore and the pens which also impede freedom of navigation. Recreational boaters who launch from the Garden Point boat ramp must hug the western shoreline to travel either north into Long Bay or South towards open sea.

The noise in particular has increased significantly since operations recommenced in 2017. Noise from the site can be heard at our house over a kilometre away, particularly at night. I am advised that visitors staying at the Port Arthur Caravan Park, have complained to Park management regarding the noise from the fin-fish farm.

The map on the following page (figure 5) highlights the areas of Long Bay set aside for marine leases:





Issue 3: The Changing Environment in Long and Stingaree Bays

There have been numerous studies conducted worldwide that have highlighted the negative impacts of intensive marine fin-fish farming operations on the natural environment, particularly in shallow sheltered bays such as Long and Stingaree Bays. There is little point in re-stating those in this submission.

With specific reference to Long and Stingaree Bays, the only descriptors of change and degradation are from eye-witnesses like myself who have lived in this area; have swam, fished and enjoyed those bays in the years prior to the commencement of fin-fish farming at Long Bay. We are the people who have witnessed first-hand the changes and the devastation to Long and Stingaree Bays that has occurred since fin-fish operations commenced in this area.

Sadly, the lack of any baseline scientific reports to back up the testimony of lay-people means TASSAL can simply dismiss our accounts and concerns by suggesting other factors as the cause of the algal blooms and degradation. Fresh water flowing into Long Bay from creeks, chemical run off by agriculture, and sewage discharge by tourist operators located on the shores of Long and Stingaree Bays have all been suggested by TASSAL as the 'causes' of the degradation in the area.

The simple fact is that the proliferation of algal blooms and the seagrass degradation witnessed by residents such as myself coincided with the presence of fish farming operations between the 1980's and 2006. They all but disappeared between 2006 and 2017 when operations ceased, but have now returned in vast quantities since fin-fish farming recommenced in July 2017. Green filamentous algae has taken hold of both bays, if one goes boating or kayaking it covers oars and paddles, it washes up on the shore covering both rocky and sandy coastal areas. In summer in particular the smell from this weed is pungent and offensive and can be smelt hundreds of metres from the shoreline inland.

The other 'causes' as suggested by TASSAL have been present for years (interestingly the Port Arthur Caravan Park is connected to the Port Arthur Historic Site waste water system), but when fin-fish farming operations are active, so are the algal blooms, the seagrass degradation, the 'chummy' water and the offensive smell at low tide. It is just too much of a coincidence to be ignored. Even if testing was to occur on today, the results (however poor), would form the new baseline. This is the frustrating part of the equation.

Photographs of the Change in Stingaree Bay: November 2011 vs November 2019

<u>Figure 6</u> is taken from the shore of Stingaree Bay in November 2011 facing east towards where the fin-fish farm is now located. <u>Figure 7</u> is taken from approximately the same spot in November 2019 and shows the fin-fish farm in the background. <u>Figure 8</u> is taken from the water of Long Bay facing north in November 2019.

Figure 6: Stingaree Bay (25 November 2011)



Figure 7: Stingaree Bay (11 November 2019)



Figure 8: Long Bay (21 November 2019)



Issue 4: No New Approvals Required to Recommence Fin-fish Farming Operations

I cannot say with any real confidence (given the prevailing attitude of the day) that had the original lease application had been subject to a full and proper environmental impact study to the entirety of Long and Stingaree Bays been undertaken, that a lease would not have been granted. But I can say unequivocally is that it was incredulous and extremely concerning that operations were allowed to resume in 2017, after an 11 year hiatus, simply because a licence had been in place for 25 years.

As was reported by ABC news at the time:

A spokesman for the Department of Primary Industries said a licence for finfish farming had been in place at Long Bay for the past 25 years. "A licence to farm finfish is in effect and no further approvals are required however there are management controls, lease and licence conditions that must be complied with," he said.

Source: https://www.abc.net.au/news/2017-08-03/opposition-builds-to-TASSAL27s-move-into-port-arthur/8770176

When it finally did announce that operations in Long Bay were to recommence, TASSAL stated publically that 14 pens would be moved in (although as <u>figure 2</u> highlights, there is / was for a time at least, 15 pens in situ). This number is greater than previous operations and the impacts of their physical presence as well as the impacts of the fish they contain, have accelerated the adverse impacts on the health of Long and Stingaree Bays.

In addition to the increased nutrient levels that both fish waste and fish feed add into the bays, the increased number of pens inserted by TASSAL effectively act as a breakwater at the opening of Long Bay. These pens, combined with a floating mussel farm (or similar) sited to the north of TASSAL's lease in Zone 15A have effectively taken over 32 hectares of waterway along the centre and eastern shore of Long Bay.

All of this infrastructure further stymies' the natural flow of water up Long Bay and into Stingaree Bay, particularly on those occasions when a high sea is running. It dramatically reduces the opportunity and ability of the sea to flush out the entire area; particularly in the sheltered pockets as highlighted in <u>figure 10</u>. This in turn adds to the increased nutrient levels and stagnation of Stingaree Bay and the sheltered pocket on the western side of Long Bay off the former Seascape guest house where algal blooms and seagrass degradation is most apparent.

Issue 5: The lack of Independent Oversight or Monitoring

Perhaps the most concerning issue with the current regulatory framework is the absence of a requirement for true independent monitoring by a regulatory authority.

The current regulations allow for monitoring to be conducted by fish farming operators themselves, or by companies of their choosing. This model of self-regulation, monitoring and reporting presents a potential for numerous conflicts of interest. This in turn could encourage wilful blindness at best through to deceit and corruption at worst by fin-fish farming operators not properly monitoring potential impact areas and reporting any changes.

Long and Stingaree Bays are a prime example of the failure of a system of self-regulation. TASSAL have engaged the company Aquenal Pty Ltd to conduct monitoring of the environment. The following is taken from the Aquenal Pty Ltd *Tasman Annual Broadscale Monitoring Report - September 2019:*

Figure 9: Monitoring Sites for Long Bay Lease

Aquenal Pty Ltd Tasman Annual Broadscale Monitoring Report Septe	ember 2019
--	------------

Site ID/Name	Location	Northing	Easting	Period measured
NUB1	Parsons Bay	5228036	559377	Feb 2014-May 2019
NUB2	Creeses	5227554	556780	Feb 2014-May 2019
NUB3	White Beach	5226198	558210	Feb 2014-May 2019
NUB4	West of Wedge	5224716	550977	Feb 2014-May 2019
NUB5 [#]	IMAS Site 5 [#]	5226021	554239	Feb 2016-May 2019
PA1	Southern Lease Boundary	5224084	570485	Aug 2013-May 2019
PA2	Carnarvon Bay	5222948	570287	Aug 2013-May 2019
PA3	Central Mid Channel	5221408	571217	Aug 2013-May 2019
PA4	Southern Mid Channel	5218242	571352	Aug 2013-May 2019

Table 1: Details of sites in the Tasman Broadscale Environmental Monitoring Program.

*GDA 94, MGA Zone 55 * Compliance site. Sampled previously by IMAS.



Figure 1: Location of nine sites (NUB = Nubeena; PA = Port Arthur) monitored for sediment and water quality (monthly) as part of the Tasman Broadscale Environmental Monitoring Program. Fish farming leases are indicated by red polygons.

Aquenal Pty Ltd Tasman Annual Broadscale Monitoring Report - September 2019 https://epa.tas.gov.au/Documents/Annual%20Broadscale%20Monitoring%20Report%20for%20the%20Tasman%20Peninsula%20and%20 Norfolk%20Bay%20Marine%20Farming%20Development%20Plan%20-%20June%202018%20to%20May%202019.pdf (sourced 25/11/19)

There are several flaws with the current monitoring arrangement between Aquenal and TASSAL with regards to Long and Stingaree Bays:

- In the absence of evidence to the contrary, it would appear that the monitoring sites are selected by TASSAL, or made by Aquenal in consultation with TASSAL.
- The monitoring sites are all in deep water.
- The monitoring sites are all (with the exception of PA1) to the south of the lease towards open sea.
- No monitoring is conducted in the shallow waters / sheltered pockets of Long Bay to the north of the lease where algal blooms and seagrass degradation appear most prolific (refer <u>figure 10</u>).
- No monitoring is conducted in the shallow waters / sheltered pockets of Stingaree Bay to the west of the lease where the algal blooms and seagrass degradation appear most prolific (refer <u>figure 10</u>).

The picture on the following page (figure 10) depicts the fin-fish farm (circled in red) and the areas of significant algal blooms / and seagrass decay (highlighted in yellow) witnessed by the author.



Figure 10: Image portraying fish farm site and location of Algal Blooms / seagrass degradation

This situation is further compounded by:

- The apparent lack of <u>any</u> independent studies or baseline records of the health of Long or Stingaree Bays prior to the commencement of fin-fish farming operations in the 1980's to draw comparisons to.
- The lack of <u>independent</u> studies or baseline records conducted by a regulatory authority such as the EPA of the health of Long or Stingaree Bays at the suspension of fin-fish farming operations in 2006 to draw comparisons to.
- The lack of <u>independent</u> studies or baseline records conducted by a regulatory authority such as the EPA of the health of Long or Stingaree Bays immediately prior to the recommencement of fin-fish farming operations in 2017 to draw comparisons to.
- The lack of ongoing <u>independent</u> oversight/monitoring by a regulatory authority such as the EPA in Long and Stingaree Bays. (When queried in 2019 if this situation would change, the EPA response was that there are no plans to conduct independent monitoring of the Long Bay lease).

Another concerning issue is the fact that the current Head of Environment for TASSAL was an employee of Aquenal prior to his appointment with TASSAL. This point is not made to suggest impropriety on the part of any individual or party, but merely to highlight the conflicts of interest that exist under a system of self-regulation, monitoring and reporting.

Issue 6: Negative Impact to Tourism Operations

The Long Bay lease is directly in the line of sight of a number of tourist operations. The cages and other infrastructure that comprise the fish farm can only be described as an "eyesore." They sit only 250 metres directly opposite the award winning Port Arthur Caravan Park at Garden Point. It is in direct line of sight of the Fox and Hounds Hotel and people undertaking the three capes walk. Cruise ships that visit the Port Arthur historic site drop anchor within a kilometre and in direct site of the fish farm. This operation and its infrastructure is viewed by thousands of tourists each year, leaving a contrasting reality to the image that Tasmania attempts to promote itself to the world as – clean, green, natural and wild.

The noise emanating from the lease site is noticeable, particularly at night, and is a constant source of irritation. Whereas once residents only heard the natural noises of wildlife such as frogs, nowadays a constant droning hum, various thumps, crashes, bangs and other noises that are clearly not natural are heard coming from the fish farm. I am advised that visitors to the Port Arthur Caravan Park have complained to park management regarding the noise emanating from the fish farm. Soon TASSAL will begin to moor the well boat Aqua Spa at the site; this vessel is some 84 metres in length and will sit directly in the line of site from practically any position for kilometres. One can only speculate at this stage as to the noise levels this vessel will emit as it conducts its operations.

Fin-fish farming infrastructure and an 84 metre long large factory boat moored on the edge of a premier national park, within direct line of sight of visiting cruise ships, and other tourist operations – hardly a pleasant visual or audio experience for the thousands of visitors seeking a natural wilderness escape, not to mention the smell at low tide. One wonders how much longer tourism operators will remain politely silent before the adverse impacts of this inappropriately located fin-fish farming operation becomes too much for them to tolerate.

Issue 7: Loopholes

The current regulatory framework has numerous loopholes for fin-fish farm operators to manipulate to their advantage without fear of being held to account. It is this lack of oversight and accountability that has led to the degradation of the Long and Stingaree Bays. Were independent monitoring to be conducted in this area, a number of significant environmental issues would no doubt come to light and question the viability of continued fish farming in this area.

Perhaps the biggest frustration of all, even more than the pollution, the noise, the smell, the loss of amenity and the impact to the natural environment is the implied consent of the current legislative framework which allows such adverse impacts to occur.

The current laws and regulations do not appear to hold fin-fish farm operators to account, but provide sufficient 'wriggle room' should operators choose to engage in the same. Operations are conducted in the interest of profits and with perhaps less concern for the impact those operations have on the environment surrounding them or others around them; the introduction of the well boat Aqua Spa is a prime example of this behaviour.

It would appear the standard modus operandi for fin-fish operators is make a series of small changes over time with regards to infrastructure or operations rather than attempt one large change; effectively they take bite size pieces to slowly obtain what they want. Before anyone fully comprehends what is happening they are making an application to effect a major change or alteration to the conditions of a lease, based on what is already occurring in their operations.

Conclusion & Recommendations

The impacts of fin-fish farming to Long and Stingaree Bays are both dramatic and obvious. Those of us who have lived and used these bays for 50 years and more can attest to the standards and clarity of the water prior to the establishment of fish farming and the dramatic changes observed in the years since fish farming operations commenced.

Long Bay is not an appropriate or proper site for fin-fish farming. The shallowness of both Long and Stingaree Bays, and the relatively low tidal movements and currents in these bays, are insufficient to remove the fish waste and fish feed produced at this operation. This, combined with the breakwater effect of the fish-farm infrastructure, further impedes sea movement. As a result, nutrient levels in sections of Long and Stingaree Bays have increased to the point that outbreaks of filamentous green alga and other algal growth occur unchecked as well as the decay of the natural seagrass beds.

Long Bay and Stingaree Bay were not afforded protection in the past and as a result an inappropriate aquaculture development was allowed to proceed without proper consideration of the adverse impacts. The current framework of self-regulation, monitoring and reporting has also proven an abject failure. The lack of a requirement for independent monitoring under the current framework allows the environmental degradation and suffering of the health of Long and Stingaree Bays to continue unabated to this day.

I strongly urge the parliamentary committee to consider the following points and, where required, recommend the introduction of legislative amendments to enable the following:

- The immediate implementation of continuous independent monitoring of all fish farm leases by the EPA (in addition to the monitoring undertaken by operators).
- An increase to licence leasing fees paid by marine farming operators to fund continuous independent testing and monitoring by the EPA of all fin-fish farming leases and the surrounding environment.
- Independent testing conducted by the EPA of all new fin-fish lease applications (in addition to those undertaken by operators / proponents) prior to approval.
- The immediate suspension of all new / pending fin fish licence applications until independent site testing has been conducted by the EPA.
- Immediate independent testing and sampling by the EPA of Long and Stingaree Bays by the EPA, particularly in the areas highlighted in <u>figure 10</u>.
- Immediately ban the establishment of new fin-fish leases in shallow / sheltered waters and bays such as Long Bay.
- The cessation of all current fin-fish operations / leases in shallow /sheltered waters and bays such as Long Bay within 10 years and relocation to more appropriate sites (open sea or in appropriate onshore enclosed / loop operations).