**THE LEGISLATIVE COUNCIL GOVERNMENT ADMINISTRATION COMMITTEE A SUBCOMMITTEE MET IN COMMITTEE ROOM 2, PARLIAMENT HOUSE, HOBART, ON TUESDAY, 20 OCTOBER 2020**

**INQUIRY INTO FINFISH FARMING IN TASMANIA**

**Mr SAM IBBOTT**, DIRECTOR, MARINE SOLUTIONS TAS PTY LTD WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED

**CHAIR** - Welcome, my name is Meg Webb, I am the Chair of this committee, and I am the member for Nelson. I am joined by Rob Valentine, member for Hobart; Ruth Forrest, member for Murchison; and on the line with us through the system is Mike Gaffney, member for Mersey.

Thank you so much for coming in and sharing your time with us for this hearing. We appreciate it. There are a few things I will run through to start us off.

The evidence taken in this hearing is protected by parliamentary privilege but comments you make outside this hearing may not be protected in that same way, so just be mindful of that. You have a copy of the information for witnesses?

**Mr IBBOTT** - Yes.

**CHAIR -** Excellent. The evidence you are presenting today is being recorded. A *Hansard* version will become available and be put onto the website. We are also broadcasting the hearing today while it is happening.

If there is anything you feel should be heard in camera, you can make the request to the committee and we will consider that request at the time.

What normally happens is we ask you to swear in and then you are very welcome to make some opening remarks if you would like to do that, and then the committee will have some questions for you. If that is all right, we will proceed.

Would you like to make some opening remarks?

**Mr IBBOTT** - I have written a short piece just to contextualise some of the work that we have been involved in and also where my organisation comes from.

Thank you for allowing me to join with you today and discuss aspects of finfish farming within Tasmania. I grew up on the east coast of Tasmania and was always swimming, snorkelling, diving, sailing, was in or on the water. Over time I developed a love and understanding of the marine environment and its habits and species. I did a degree in marine and freshwater and Antarctic biology at the University of Tasmania - UTAS - in the early 1990s and went on to be employed by the Department of Primary Industries, Parks, Water and Environment - DPIPWE - and the Institute for Marine and Antarctic Studies - IMAS, which was then TAFE. I was involved in the bio-regionalisation of Tasmania, working on marine reserves, fishery stock assessments, habitat mapping and environmental impact assessments.

After 10 years within that system, I left and started my own environmental consulting business, which now employs 22 part-time and full-time casual employees, all of whom have their own story based on a love of the ocean. They are all marine people. Among them are four PhDs, four masters graduates and honours graduates as well as a plethora of other achievements along the way.

I am telling you this because Marine Solutions has a talented pool of people with a broad skill base from ecology through chemistry to social sciences. We work across numerous sectors for a wide range of clients, one of whom, and only one, is the finfish aquaculture industry. We regularly work with the three aquaculture companies, Tassal, Petuna and Huon Aquaculture, as well as with DPIPWE and the Tasmanian Salmonid Growers Association.

Periodically we work with other groups that have a special interest in one or more aspects of finfish aquaculture as well.

I recognise and understand the many facets and interactions between the industry and the Tasmanian community, and the tensions and competitive views that sometimes occur between stakeholder groups. To some degree, at Marine Solutions we see ourselves as custodians of the marine environment, and to this end our work is always scientifically rigorous and, where possible, the data we collect is directly comparable to others working in the marine environment, so IMAS or CSIRO. We work collaboratively with those organisations and freely share information to make sure that the work we are doing remains relevant.

We aim not to be protectionist but provide quality information and pragmatic advice which can assist, inform good management decisions and ensure sustainable use of Tasmania's natural competitive advantages, one of which is our marine environment.

Despite this, we are consultants and much of our work is for clients who wish to answer a particular question and who do not or only partly release the data and reports to the public record. Thus, an inordinate amount of the work we do is consigned to the 'grey' literature. The breadth of our work means we are often looking at impacts from a much wider perspective than a single industry. Therefore, I feel we can sometimes contextualise impacts in a more broad way than perhaps some with a solely aquaculture focus. We have brought expertise across multidisciplinary projects which lend well to predicting, characterising and understanding impacts related to finfish aquaculture.

I believe the finfish aquaculture industry is an important thread in the fabric of Tasmania and, given its relatively short life, it has obviously grown rapidly. The rapid growth, along with the technological change to allow this, has resulted in an industry that is learning as it develops. This is also true of the regulatory framework and the area of government that develops and administers this framework.

As a general comment, the Tasmanian finfish industry has been excellent at looking globally for solutions and then adapting them to Tasmanian conditions. This means the farming methodology here may not replicate other areas and so neither should the regulatory framework but rather adapt to what is required to manage the industry in a sustainable manner and within broader community expectations, understanding the environment and the potential management tools and then selecting the correct tools to manage each location. Not every tool at every location is imperative to the ongoing vibrancy of the industry and the environment.

As outlined in our submission, we have experience and expertise in monitoring water quality, sediments, algal communities; modelling wave current and depositional loads; and undertaking targeted investigations into particular observations or things of interest often highlighted on social media. I am happy to discuss any aspect of those things to which I may be able to add to the conversation.

Thank you for the opportunity.

**CHAIR** - Thank you for that opening statement. It is useful. Thank you for the submission you made to the inquiry, which was also very interesting reading. I will start off with a broad question that relates to part of our terms of reference. It is looking at the industry growth plan. I am interested to know: was your organisation involving in the wider input as part of the development of that plan?

**Mr IBBOTT** - No. The growth plan was something that we first viewed online.

**CHAIR** - So not during the development phase when input was being sought from stakeholders?

**Mr IBBOTT** - No.

**CHAIR** - Have you been involved in the one-year review that occurred, and I guess there is a review in progress now?

**Mr IBBOTT** - No. We are sitting outside that process.

**CHAIR** - Is that a decision you took because you are consultants in the industry and therefore feel that your role is best served in that way rather than by becoming involving in commenting on government strategies or plans?

**Mr IBBOTT** - No. It is possibly because our field of expertise is narrower than the breadth of that growth plan, which is large and complex. While we could comment on sections of it - I would feel comfortable doing that - I feel that other people are better placed to guide that. I am not sure that it came from industry consultation to start with.

**CHAIR** - Why is that? Could you repeat that?

**Mr IBBOTT** - The growth plan was developed initially without any input from myself or other marine consultants as far as I am aware. We haven't waded into the process.

**Mr VALENTINE -** Thanks for coming to present. I grew up on the east coast like you, at Dunalley, so I had similar experiences.

A broad question in terms of the area you work in: how does your company handle the conflicts of interest process? Quite clearly you work for government. You do work for industry. I think that is right?

**Mr IBBOTT** - Yes.

**Mr VALENTINE** - What processes do you use for your employees and yourself, I suppose, to assess whether there is conflict in what you are about to do? How do you handle conflicts of interest?

**Mr IBBOTT** - In a way we are quite lucky because the work we do is based around the scientific method, so we have a rigorous scientific approach. Therefore the data is the data, and so we collect the data in a way that is defensible and present it in a way which is hopefully able to be utilised well for management or is fit-for-purpose, I guess, for whoever is using that data. For example, if we were doing a broadscale water quality run, we would go to the sites and collect all the water information and then we would synthesise that and graph the information. We could present that information to the Environment Protection Authority - it would have a copy of that as part of the regulatory process - but equally the companies would have a copy of that same data and same report, and they might use it for a production outcome. That is not my field of expertise, but it is the same data presented to different organisations.

**Mr VALENTINE** - So you basically concentrate on the science, and the science only?

**Mr IBBOTT** - Yes.

**Mr VALENTINE** - Is that what you are saying?

**Mr IBBOTT** - Yes we are not making a value judgment about things. The data is the data - we present the science.

**Mr VALENTINE** - And your interactions with government and companies are focused purely on that data and no other aspects?

**Mr IBBOTT** - Obviously there are other external factors, and we are aware of those, but that is not something that guides our decision-making or data collection.

**Mr VALENTINE** - That is all right; I just wanted to have that on the record.

**Ms FORREST** - You mentioned a a couple of things that I would like to go into a bit further.

One thing the committee is looking at is the most appropriate regulatory framework with which the industry operates under. I do not want to verbal you, I do not want to try to say what you said at all, but we hear that the government and the industry are using an adaptive management approach rather than the precautionary principle. There has been some contention between the most favourable approach there. You talked about adaptive management as the science being used. You don't regulate finfish farming the same way as you would forestry or land-based activities necessarily. Can you tell me a little more about what you meant around that?

**Mr IBBOTT** - Of course. I guess it is well documented that there are a range of sources so I am just going to stick to the marine environmental component rather than the light and noise of some of the other things. It is well documented that the main sources of impact are particulate emissions from uneaten feed pellets or fish faecal material and soluble omissions, so dissolved nutrients, as well as marine debris. Within the things we are mostly involved with

is the nutrients, so soluble omissions and particulate omissions, and understanding what the effect of those is on the surrounding environment, both within and outside the lease.

Now in Macquarie Harbour, for example, the water is very, very dark. The light can't penetrate it, therefore rocky reef communities or monitoring algae growth - it is not going to be a good indicator - in Macquarie Harbour is not going to be a good indicator of impact whereas monitoring algae communities in Okehampton Bay, where the water is quite clear, the light can penetrate down to a greater depth and the algae can respond to and increase the nutrient load, or it may respond to an increased nutrient load. That is a good tool in that location. So I think using the right tools that are fit-for-purpose in each location is important.

**Ms FORREST** - Can I just to paraphrase then, Sam? Because of the nature of the environment in Macquarie Harbour, which we know is quite different to Storm Bay or Okehampton Bay or any other area that is not like Macquarie Harbour ,which is unique in itself, it would be not unreasonable to have a different regulatory approach to those bodies of water because of the nature of the way that aspects - or side effects, if you like - of finfish farming interact with the marine environment.

**Mr IBBOTT** - Yes, that is right. I think Macquarie Harbour is unique in its own way. I am sure - I hope, anyway - that Jeff Ross from IMAS is coming in and I would defer to him. He has been working solely, or has been very focused, in that space for a long time, and he has a wealth of knowledge. An example from Macquarie Harbour might be that the regulatory framework at the moment talks about *Beggiatoa*, that little discolouration on the seabed. There are management responses for *Beggiatoa* both within and without the lease.

There is no doubt that *Beggiatoa* is a response to organic enrichment. Whether a discrete patch of *Beggiatoa* some kilometres from an aquaculture lease could be related to that lease, in my mind is questionable, because I have also seen that same *Beggiatoa* in the Prosser River at Orford and up in Great Oyster Bay. Where there has been a localised organic enrichment, we see a small patch of it elsewhere.

Having the right management tool - maybe that is not the right one in that instance. Maybe the sulphides in the sediment, or the infauna or some of the other triggers are better tools to understand the impact of the farms in Macquarie Harbour.

**Ms FORREST** - You talked about the science you do. Obviously you are instructed by your client, as you mentioned, about what question they want answered. It seems to me that you provide a lot of data, and various parts are used by various bodies.

Correct me if I am wrong, Sam, in that assessment of what you said. Does that sometimes create some inability to see the big picture? If the EPA is taking that bit of information for its purpose and the industries taking that bit for another purpose, do we run the risk, in some of that, of not actually taking the whole data setting into account?

**Mr IBBOTT** - I am trying to think of an example where that would be true. By and large, our ongoing monitoring is broadscale water quality monitoring, which is done regularly, and that dataset is provided to the companies.

In the D'Entrecasteaux Channel, the Broadscale Environmental Monitoring Program - BEMP - is administered by the Tasmanian Salmonid Growers Association - TSGA - so all the companies are contributing, and they are the recipients of that entire dataset, as is the EPA.

The equivalent broadscale monitoring on the east coast: because Tassal is the only company, it is responsible for doing that. We do that directly for Tassal, but we provide the information in the same manner to the EPA, and the reporting goes to the EPA and to Tassal.

**Ms FORREST** - You may not know the answer to this. Is that information then uploaded to the data portal?

**Mr IBBOTT** - I don't know. I do know the EPA has a consolidated dataset of everything. We work with the EPA to maintain it up to date.

**CHAIR** - My understanding is that the raw data isn't uploaded to the data portal, just indicators of various sorts that have been determined to put on there. We can follow that up with the department.

**Ms FORREST** - Yes. Would there any barrier from a commercially sensitive point of view from your business, to have that data uploaded to a public space?

**Mr IBBOTT** - No, we provide the entire dataset to the EPA. I believe it has a database that has every single data point we have ever collected.

**Ms FORREST** - Even though you have provided all the data, that would not be commercially sensitive from your point of view?

**Mr IBBOTT** - Not to us.

**CHAIR** - Picking up on what Ruth was speaking with you about a moment ago, and that is the idea that each location is unique, has its own circumstance and will require, probably, the identification of the right sorts of things to monitor and note and measure. That might look a bit different in each location to give a proper picture of the impact the industry is having.

In terms of a regulatory approach, it is not necessarily a different regulatory approach that is required, because we probably have a consistent regulatory approach in terms of the requirements related to monitoring, it is just the specifics of what is monitored and the acceptable levels that have been identified, and therefore the trigger points for action. Would that be fair to say?

**Mr IBBOTT** - Yes.

**CHAIR** - From your point of view, at the moment, in terms of your familiarity with the way things are monitored and measured in different locations around the state, is that the approach we have now? A very tailored, site-specific and nuanced approach in each of the locations according to its need.

**Mr IBBOTT** - I would have to say we're moving towards that, the more that we understand things.

Obviously the industry has a legacy, so particular things have been in particular locations historically. As the industry has changed, and the lease sizes, and pens have changed, some of the parameters that are monitored have also changed - they have been contextualised.

Also, as new areas are explored, so Petuna is interested in exploring the north-west, and Tassal had a program on King Island for a number of years. As part of that research permit and scientific research process, we would conduct monthly water quality tests at both those sites. We would discuss prior with CSIRO what they would need for a biogeochemical model, what information needed to come out of that and then look at the most recently licensed regulatory monitoring programs. The ones prior to anything being stopped are in effect voluntary. They are gathering two years of data to understand the nuances of a location, seasonality so we would design a program that reflected what the most up-to-date licence conditions were so that we wouldn't have to change the parameters if a site were developed and stocked. We can build a long baseline.

**CHAIR** - That makes sense for new sites that are being contemplated. In terms of existing sites that may have been in operation for quite some time, have you been involved in assisting with updating and improving the parameters of what is monitored and measured to make it a more tailored approach? For example, you mentioned in Macquarie Harbour the *Beggiatoa* perhaps not being the best thing to measure and monitor, but something else. Have you been involved in helping to adjust or improve?

**Mr IBBOTT** - Not at the regulatory level, but I have been involved in discussions with both government and organisations from marine farming companies about what we think is useful.

**CHAIR** - Is there a formal way you provide that input in terms of set reviews, for example, or is it something that has happened in an ad hoc fashion?

**Mr IBBOTT** - More ad hoc.

**Mr VALENTINE** - In your submission, you talk about the inter-calibration regatta. Can you describe that for us a little?

**Mr IBBOTT** - If you walked outside with a thermometer and said it is 17 degrees today and I walked outside with a thermometer and mine said 16, we would have a bit of a dispute and 16.5 would be our cut-off for wearing shorts and we would discuss whether that was a good thing or not. We would get together with our direct competitors, with people we collaborate with and with all the people who have the same or similar equipment to us - so IMAS, CSIRO, Derwent Estuary Program, Norske Skog, Aquenal and ourselves - and we would have an inter-calibration regatta where we would go and calibrate all our equipment to make sure that we are all reading the same things. We are comparing apples with apples.

**Mr VALENTINE** - That is great.

**Mr IBBOTT** - A report comes out of it. It means the information from the Derwent Estuary Program, for example, is directly comparable to the information we are collecting and IMAS is collecting in Storm Bay and CSIRO is using for a model. That is a microcosm of ensuring that our data is robust.

**Mr VALENTINE** - How does that go for historic data? Obviously you couldn't do it way back - organisations like yours and government and whoever else is involved in monitoring and measuring?

**Mr IBBOTT** - That is a challenge where we can't have an elegant solution for all those things. One example where that is a challenge is that if you use the same laboratory for analysis all the time, you get very consistent results. If you go to different laboratories, often they have a little inter-lab variability. I believe with the BEMP dataset, for example, the CSIRO laboratory did the analysis for a number of years and then it changed the laboratory to Analytical Services Tasmania - AST. It used a slightly different method or a different analyser and everything jumped. It went straight again but there was a jump at the time of changing labs.

**Ms FORREST** - The baseline basically changed?

**Mr IBBOTT** - Yes, the numbers coming out of the machine changed. It is relative. If it was trending one way or the other, it would still pick it up with any of the labs, but there can be inter-lab variability. As long as we acknowledge that, we can deal with it.

**Ms FORREST** - We see that in the budget papers every year when they change the system.

In your submission you provide objective environmental advice and design, and you commit robust baseline study and monitoring programs to document impacts on a range of activities on the marine environment. A body like Macquarie Harbour has a number of inputs, as do other areas. When you do the assessment, do you look at what contributes to the nutrient load in the water or do you just measure it and do not make any assessment of where it might have come from, whether it is run-off from land, whether it is high rainfall effect or whatever?

**Mr IBBOTT** - It depends a little on what the question we are being asked is. We understand there is a range of inputs. There's a treatment plant discharging into Macquarie Harbour so there's a nutrient source at the head there. There's the historic heavy metals in the sediments from mining tailing operations. If we were looking at a particular aspect, we would take some of those other inputs into account.

**Ms FORREST** - Let's just stay with Macquarie Harbour. Dissolved oxygen levels are obviously one of the key indicators there. We know that the hydro activities on the Gordon can significantly impact on dissolved oxygen levels. If you were monitoring in that area, do you look to attribute a particular change or something in the elements you are monitoring and attribute them to a particular thing, or do you just note them?

**Mr IBBOTT** - Macquarie Harbour is probably a bad example because we haven't done a lot of work there. But generally we would just note what they are and whether there was a trigger. In the Mercury Passage, which is where we spend a lot of time, we gather the data and graph the data. The data is the data. We're not making a value judgment or a call that it's likely to be impacted by something or other, like high rainfall.

**Ms FORREST** - Let's say the monitoring you are doing in the area where Petuna is, the north-west, when you have a really heavy rainfall, which happens from time to time up there,

and you get a lot of water running out of the rivers, if there has been a significant rain event or something like that, would you note that in that data?

**Mr IBBOTT** - Yes.

**Ms FORREST** - You would, right.

**Mr IBBOTT** - For example, up there we have a site closer into the islands that's periodically impacted by the Montagu River. We know that because the salinity drops. If there's a drop in salinity concurrent with a spike in nitrogen, it's not unreasonable to link the two - to say there's an influence from the land-based sources. However, at the other sites further offshore, the salinity's still oceanic and the nitrogen is the same as it was the previous month, or similar. It's what we'd expect. No, we do note that.

We don't report on it every month. We might have a number of months, or even a year of data. In the case of that Petuna one, we've been recently undertaking a zone assessment for it, which is a significant piece of work. We were up there for a long time doing very detailed multi-beam mapping, sediments, threatened protected species surveys. A lot of video and camera work over the spatial scale of maybe 30 to 40 kilometres around the area to understand how the habitats in that area extend. Consolidating that only happens once at the end of that project.

**Ms FORREST** - If we stick with that area because it's a little contentious at moment. It's of interest to me, but it's also a little contentious because it's the time when all this work's being done and people are still concerned about the baseline monitoring that's being done. When you look at the area, you are monitoring closer to shore inside the islands as well as beyond the islands where the lease is, the area of the lease: How far around that? Are you going beyond that out to sea?

**Mr IBBOTT** - Yes.

**Ms FORREST** - Further beyond that?

**Mr IBBOTT** - Yes.

**Ms FORREST** - Can you just describe that, Sam? I think it's interesting for people to understand what work is done before a fish farm is actually put anywhere.

**Mr IBBOTT** - Okay. So, Petuna was interested in exploring the north-west as an area for potential expansion and asked us to assist with that program. We spoke with CSIRO about where it would need information about currents and wave heights to build a biogeochemical model. Initially we deployed three ADCPs - machines that measure the waves and currents - to inform CSIRO's model. They were in for a few months each. Often, we do a minimum of six weeks because there's a lunar cycle with spring and neap tides.

Then we put ADCPs at a number of other locations, one of which the current speed looked appropriate - if you like, high enough to help environmental assimilation of waste but not too high to impact production. Then we did some drop camera work and found seagrass in

that area and said, 'Right, that's not suitable. That's not suitable'. So, over time we refined the area it was interested in, all the while each month collecting water samples at three locations.

**Ms FORREST** - Measuring the nutrient load?

**Mr IBBOTT** - Yes, and doing water profiles as well to understand whether the water was fully mixed. Is it the same at the top and the bottom or is it stratified? Unsurprisingly, up there with three-metre tides and topography it's fully mixed. After 36 consecutive months of collecting water quality, Petuna was honing in on an area it was more interested in so we did three more ADCP deployments out there for longer periods to pick up wind-wave-current over particularly north-east or summer periods. When they decided they would like to pursue that to the next stage, we undertook -

**Ms FORREST** - You mean north-east weather coming through?

**Mr IBBOTT** - Yes, north-east weather coming in there because there is some shelter from the islands. Petuna is looking at a location over 10 kilometres from the nearest landmass and when it decided to progress to the next area that is when we had embarked on, I guess, a more targeted but - so there are guidelines provided about what a zone assessment has to entail. I believe IMAS informs the Marine Farming Branch of what those guidelines are and then they are provided to us.

We undertake that work which we went well over and above the guidelines because we wanted to understand, because there is not a lot known about up in the north-west initially. Does the habitat we have found within the lease reflected in the broader area or is unique to the lease - you know, the zone area? We ended up doing a 30-kilometre radius circle of camera drops and videos and multi-boom mapping which identifies any feature on the seabed bigger than, say, 50 centimetres so if there was a rocky reef or a ship wreck -

**Ms FORREST** - There are no rocky reefs there?

**Mr IBBOTT** - No, nothing identified. We worked with a surveying firm to do that and mount significant equipment onto a vessel and spend a week out there mapping that. A lot of thought and information goes into that pre-stage so there is -

**CHAIR** - In terms of all the monitoring and measuring you are doing, that is for the company interested in the site. Are you aware whether all of that will then become in some sense publicly available data? Or whether it will become part of the application if such an application comes through for a lease in that area?

**Mr IBBOTT** - That is what I would imagine. A lot of it becomes assimilated into the EIS so it becomes a publicly available document.

**CHAIR** - Which is not the data itself necessarily?

**Mr IBBOTT** - No, not the raw data.

**CHAIR** - I wanted to pick up a bit on that too because in your submission - actually even in your opening comments - you talked about working within a broader community expectation around industry. In the submission you talk about the integrity of data being central to building

and maintaining community trust in the interpretation of that data, and that transparency and accountability are really important processes to ensure the public is accepting of the industry.

Do you have an observation - knowing that, I think you have said today that a lot of the actual data you were involved in collecting and providing does not go into the public domain - do you have a view about the opportunity we have to look at how that data becomes more publicly available?

**Mr IBBOTT** - I have had a few ideas, none of which I have been able to bring to fruition at this point. One of the things I have done a number of times - let's pretend we are doing some monitoring for Petuna up in the north-west and there are some people up there who have concerns about that. I asked Petuna whether it would be okay if these people, whoever they are - and I am a reasonably affable sort of a guy I chat to a man on the street - if they joined us on a sampling trip to come and see what we actually do and to build an understanding.

It does not mean it will change their mind but it might mean that people in the broader community have a better understanding of how the data is collected and why it is collected and what we do and how that then can inform what is going on. It is interesting I have done that a number of times and some people have chosen to join us and some people are wilfully ignorant, which is fine.

**Ms FORREST** - Has Craig Garland gone out with you.

**MR IBBOTT** - He has not.

**Ms FORREST** - Have you invited him.

**Mr IBBOTT** - I have asked Matt Moran to come out.

**Ms FORREST** - All right, Matt Morgan.

**Mr IBBOTT** - Morgan yes, but I have not asked Craig.

**Ms FORREST** - You should ask Craig.

**CHAIR** - I guess what you have identified is that there are two levels of visibility. There is the visibility about how the monitoring is being conducted and the measuring, and what is being monitored and measured. Then there is the visibility of the actual data as a secondary layer over that so that people can actually see that raw data and not just the interpreted end point that might come through an EIS or the like.

It is interesting to hear you are involved in trying that first level of visibility, as in how you are going about it, and what you are doing.

**Mr IBBOTT** - I think it is useful to educate people in general about what we are doing, and they can see that the data is the data, and how it is collected.

**Mr VALENTINE** - In your submission, under terms of reference 1(a), you highlight a particular issue of how the data you collect can help decision-making. You talk about during

baseline assessments for Storm Bay farming expansions, Marine Solutions detected a low profile reef within a proposed lease area.

Are you able to talk us through exactly what you did there, at that particular point, and why the change? Why this reef was to be not included in the lease area, perhaps?

**Mr IBBOTT** - The initial proposal, at this stage, was that we were doing a zone assessment work for Petuna, and it had an initial area that it was interested in, and so we were focusing our investigations on that area. As part of that, with the mapping I was discussing previously, we found some areas of low profile reef which basically looked like sand on the video with sponges growing out of it. It is likely reef over which the sand moves in that area and it would not be appropriate to place a farm over the top of that.

Interestingly, that was the first job we did for Petuna, so the first bit of information I had for them was bad news.

I said that is not something I am comfortable with and Petuna was in agreement for a range of reasons. I believe they went off then and negotiated with the Marine Farming Branch about alternative locations, and rejigged it. We redid that piece of work in a different area to look for an area without the low profile reef.

I think that has now fed into the IMAS project in Storm Bay. They are doing some multi-beam mapping out there to try to determine the extent of some of those low profile reefs as well.

**Mr VALENTINE** - You are talking about doing baseline assessments of Storm Bay. Was an extensive set of measurements done? Do you think - maybe it's probably a bit unfair to say - there is enough baseline assessment being undertaken for the Storm Bay leases?

**Mr IBBOTT** - I know we were out there for a week. So, seven days of 24-hour operations just steaming backwards and forwards. We covered a lot of Storm Bay, logging the seabed type and depth, and then followed that up with a range of video drops in the areas of interest.

The other thing we were involved with was discussions with the rock lobster industry - and it has been very good in helping understand where its fishing grounds are, so that there isn't an overlap, and there is a buffer zone.

Getting a crayfisherman's secret cray spots out of them isn't always the easiest. They have been very forthcoming with saying, 'We fish here, and here, and here.'. We can put that on a chart and very quickly rule out those areas.

**Mr VALENTINE** - Do you do things like dissolved nitrogen levels, and those sorts of measurements when you are undertaking an operation like this?

**Mr IBBOTT** - Not when we were doing the mapping, but certainly there is a Storm Bay broadscale environmental monitoring project - BEMP - so there is monitoring out there.

Around the peninsula side of Storm Bay, so the West of Wedge, at the Petuna lease, and down the eastern side of Bruny Island.

**Mr VALENTINE** - Water movement? Do you do testing of -

**Mr IBBOTT** - I'm not involved with developing the models for that, but I believe CSIRO is involved with a large Storm Bay project for the broad circulation of Storm Bay.

We know, sort of, what happens, because you can see on the back side of Bruny Island is clear blue water coming up, it entrains the Derwent and goes out past Betsey Island, where it is often browny-green, and down past the peninsula. A broadscale movement is well understood, and we have deplored acoustic doppler current profilers at a range of locations in Storm Bay.

I have the information for it, individual points, but not as an integrated model.

**Ms FORREST** - I want to go a little bit further, Sam. You talked about the giant kelp forests and attributing the decline of those to finfish farming is erroneous because it has been in decline for a period. In the public we often hear that this is directly attributable. I am interested if you want to add anything to that, not that it is your job necessarily to justify that. Also, while you are thinking about that, you talked about the floating mats of detritus around Port Arthur. We went down, as a committee, and looked in Long Bay and Stingaree Bay and we saw a lot of algae in the water and up on the beaches or onto the shore. It seems that in talking to people who have lived there all their lives, they have seen quite a change. I understand why people who see a fish farm go in, and this happens over here within visual distance. How do we determine what's what?

**Mr IBBOTT** - This is something I feel reasonably comfortable to speak about. There is a range of things. We work on the principle that correlation does not mean causation. We have to have some scientific underpinning in that. Just because something has happened doesn't mean it is related to something else. The kelp forests, for example, and this is going to be a really quick runover -

**CHAIR** - We haven't heard so much about the kelp. It is more the algae we have heard about mainly. Given that we are short on time, maybe you might want to talk about the algae situation a bit more because that concern has been raised with us more so than kelp.

**Mr IBBOTT** - The algae has certainly been raised as an issue and we were asked to investigate that to see if we could find any link. It is a difficult task to come in post-hoc and look at something so we took samples at a range of locations around Stingaree Bay and Long Bay and broader Port Arthur and we sent those off to a lab for next generation sequencing - so eDNA - to see if we could come up with any link in the DNA between the algae, salmon and salmon feed. We took water samples, and looking at coliforms as well, because they would indicate another source of nutrient from sewage or something like that, rather than the fish farm. And yes, there were elevated coliforms in a few locations and we couldn't detect a link with next generation DNA sequencing. That's not my field of expertise; we outsourced that to a lab.

At the same time as those floating mats of algae down there - I agree, they are unsightly and odorous and I wouldn't want them in front of my shack - but within that week we were sampling for the oyster industry in Cloudy Bay and in my submission, you will see a photo which is somewhat similar which was in Cloudy Bay. That is a similar type of environment that has a limited amount of farmland around the back of it. It has freshwater input from a

creek, and Cloudy Bay is renowned for clean oceanic waters coming in there. It is occurring at Cloudy Bay. I have seen the same again at Little Swanport in the estuary there, another estuary. I was there last week and there were large mats of exactly that same filamented screen with a brown on, it so with my scientist's hat on I would look at that and I would say I wouldn't want it in front of my shack.

Yes, there has been a change. Can we attribute that? The investigations we have done don't have a direct causal link and it is elsewhere as well. Maybe it is something to do with this broadscale change which is happening in Tasmania.

**Ms FORREST** - Climate change, Sam, or something else?

**Mr IBBOTT** - Possibly a whole range of interactions, I suggest. People talk about it being hard to catch a flathead in the channel, and I agree that it is hard to catch a flathead in the channel compared to 20 years ago, but I also think there are 100 six-metre runabouts at Dru Point Boat Ramp and IMAS has done a range of work into that. I think Jeremy Lyle and Graeme Ewing have published a report about recreational fishing pressure being the driver for that type of thing. Then the giant kelp forests being in decline - people say there used to be kelp here and now there's not. That's true but the east Australian current, which is a low-nutrient current, pushes south onto Tasmania and it stays south for much longer. Where we used to have nutrient-rich water upwelling from the Antarctic bottom current, we now have nutrient-poor water that isn't enough to support the giant kelp communities, where the giant kelp is staying -

**Ms FORREST** - So it's Australia's/the mainland's fault, that's it?

**CHAIR** - Can I come back to the algae for a moment because you mentioned noting it in other locations, as well as the areas that are quite close to the farms around the peninsula for example. The nutrient levels around the farms are going to be higher and the link is that algae grows more when there are available nutrients in the water and the nutrients there, from what I understand, are largely generated through the fish farms.

In those other areas where you found those mats, are there reasons there'd be elevated nutrients in those locations?

**Mr IBBOTT** - Not that I can think of. That's why I mentioned Cloudy Bay. There is a limited amount of farmland and a creek as an input. When you say I found those - we did; we found them there but we weren’t off looking for them - they were just opportunistic observations.

**CHAIR** - Sure, you noted them.

**Mr IBBOTT** - Yeah, and Little Swanport somewhat the same. Both of those locations have oyster industries which are filter feeders, so they are removing nutrients, removing plankton from the system all the time, and they are in those locations because they do have good water quality, especially Cloudy Bay. It's renowned for it.

**Mr VALENTINE** - A supplementary question: when you undertake that testing, let's say Stingaree Bay and Long Bay that we were talking about earlier, are you given the areas to sample, or do you devise where that sampling takes place?

**Mr IBBOTT** - No. We devise. We have a look and think what's likely to happen. We use our professional judgment in the field often, and sometimes it's even down to a safety scenario - can we get the boat in there? what's the wind doing? - but all those locations would be reported with a GPS location and the findings from that.

**Mr VALENTINE** - I just wanted to know what the process was. Whether the organisation that's employing you to do the work is stipulating where the sampling will take place -

**Mr IBBOTT** - No.

**Mr VALENTINE** - or whether you're actually specifying that.

**Mr IBBOTT** - No, we're doing it. Generally, we would have a broad approach to try - if the current was going this way or that way, we would pick up sites on either side, that sort of thing.

**Mr VALENTINE** - Thank you.

**CHAIR** - We have come to the end of our time. I have been checking in with Mike during the time and he's fine. He doesn't have any questions to add at this stage. I think we might wrap it up, Sam, and say thank you very much for your time. We really appreciate you coming in to speak with us today and add more to the material you'd already provided, it's been really useful.

**Mr IBBOTT** - Thank you, and good luck. I don't envy you trying to pull everything together into a nice cogent report. It's a many-tentacled beast.

**THE WITNESS WITHDREW.**

**Dr DOM O'BRIEN** WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

**CHAIR -** My name is Meg Webb, I'm the chair of this inquiry and I'm joined by Rob Valentine, Ruth Forrest and Mike Gaffney via the video-link.

Thank you so much for your time today. We'll run through a couple of things to start off if that's all right. These are public hearings for the Government Administration Committee A Subcommittee Inquiry into Finfish Farming in Tasmania. The evidence you are providing today is protected by parliamentary privilege, but once you are outside the hearing that's not necessarily the case.

You have had an information sheet for witnesses form made available to you? Yes, good. The evidence is being recorded and the *Hansard* version will become available and put onto the website to be publicly available. We are also broadcasting the hearing today.

If anything comes up that you feel the committee should hear in camera, you are very welcome to make that request and we will consider the request at that time.

You are very welcome to make some opening statements and we will then have a series of questions for you afterwards. All clear?

**Dr O'BRIEN** - Yes. I would like to introduce my experience in the industry anyway. I was fortunate enough to gain a scholarship about 30 to 35 years ago to come out to Tasmania to do a doctorate in krill. That started me off as a marine biologist.

At the end of that time, I went back to Ireland. In those days there was a lot of unemployment in Ireland. The only way I could get gainful employment was to go into the aquaculture industry, which was taking off in the west of Ireland. I became a mussel farmer; I owned my own farm over there with a few partners, and ran that for two or three years. Then for two or three years I also worked for Friends of the Earth as a marine pollution campaigner.

After that, my wife and I wanted to come back to Tasmania; we loved it so much while we were here. We got permanent residency and we came back after three of four years. By that stage I had enjoyed working on aquaculture and growing shellfish so much that I thought I would like to continue with that and use my marine biological skills in that regard. For the first three or four years I was back in Tasmania, I worked for an abalone farm on the east coast in Swansea as their hatchery manager. During that time I became a representative of things like the Tasmanian Abalone Council and became very much involved in all the research that was aligned to that particular species.

After three or four years I moved on to gain more experience in various shellfish. I moved to Huon Aquaculture, which was starting off shellfish at that stage. I went there basically as its mussels, abalone and oyster manager to try to get those developed and for that to take off. Over a short period of time I found I probably needed to have more employment than was available from Huon Aquaculture, so I set myself up as a consultant, which I have been ever since. Huon Aquaculture had first call on my services, but the vast majority of my time was spent in places like Victoria and South Australia, either working for individual start-

up industries or liaising with government on site planning for shellfish farms and finfish farms. I was beginning then to learn about finfish farming. That was 25 years ago.

Then the demand for salmon started to take off. Huon moved more into producing salmon. They started to move their shellfish sites back out from the shore into deeper water and converting them into salmon farms. I became very heavily involved in the organisation of where leases went, and all the environmental monitoring that was attributed to those movements.

For the last 25 years I have spent all of my time either as a marine biologist doing the marine biology around the farm, or most of the environmental monitoring, bringing that all together for EIS statements, physically doing the environmental monitoring and also site planning.

One reason I am here today is that Frances asked me. I am recently retired so I am not in the industry anymore. She said, 'I think it would be good if you gave your experience to the committee, to give another perspective of whatever is going on at the present time'. The major reason I wanted to be here was to support the expansion of the industry in Storm Bay. Where I have come to over these 25 to 30 years of site selection, environmental monitoring, et cetera, is to try to give you some confidence that moving it into Storm Bay is a really good thing. It is not a negative thing in any way in terms of industry development and how the industry can react and be sustainable into the long term.

**Ms FORREST** - On that point if I might, Chair. The expansion is quite significant in terms of size. In prefacing your comments, you are saying that it is a good thing to proceed down that path along the present expectation of growth?

**Dr O'BRIEN** - It is. Obviously there is some history behind the 30 000-, 40 000-, 80 000-tonne limits of production. Can I just explain to you where I come from and where my total confidence lies, in terms of the broadscale aspects of environmental monitoring in Storm Bay and what the effects are going to be in the environment?

Down south, if you look at the Huon and the channel, there is a quota for 40 000 tonnes, which is the same, strangely enough, as the industry suggested for Storm Bay in the first place, with possibly an expansion in the future.

The 40 000 tonnes is where I sit at present, and where the industry is sitting. You have to understand that the D'Entrecasteaux Channel and Huon River system will flush every 16 to 20 days. You accumulate everything in one place, or it moves through the channel in the Huon, but it takes 20 days to flush through that system. You don't even have a flushing time for Storm Bay. Everything is moving constantly. When I asked CSIRO to give me a flushing time to compare to the Huon and the Channel, there wasn't one there. The importance of that flushing time is huge. You don't have an environment where you can accumulate nutrients. Even the organic matter on the sea floor won't accumulate over a long period of time.

**Ms FORREST** - Doesn't it just move it somewhere else though?

**Dr O'BRIEN** - No. It is taken up very quickly.

**Ms FORREST** - By?

**Dr O'BRIEN** - On the sea floor, the organic matter is taken up by other organisms. It is broken up very quickly, and finely spread. Then it is taken up within the environment as well.

At the surface, you can't measure an increase in nutrients away from a farm in Storm Bay further than maybe 400 metres to 600 metres. You just can't measure any increase in nutrient. That is based on -

**Ms FORREST** - On farms currently there at the moment, you are talking about?

**Dr O'BRIEN** - Yes, which are sizeable in their own space. The Huon farms there at the moment, the farms where we would have been measuring the nutrients, were at full stocking density when we were doing a lot of these measurements.

**Ms FORREST** - What's full stocking density for one of their pens?

**Dr O'BRIEN** - No. For the lease itself.

**Ms FORREST** - How much was the lease? How much was in there?

**Dr O'BRIEN** - You would have between six and 12 pens running at any time on the whole lease.

**Ms FORREST** - What's the density? The stock rate of each of the pens then.

**Dr O'BRIEN** - When they're up to full production, probably around 200 tonnes or somewhere higher than that.

**Ms FORREST** - When they're at full stock density and full growth is when they eat the most and poo the most. That is when you were monitoring, and you are saying, you couldn't monitor additional nutrient lie beyond background levels, within 400, 600 metres of the site. The lease, or the pen.

**Dr O'BRIEN** - We have been doing that on a monthly basis, making those measurements now for over two years. That data has been available to the EPA. I understand that at the time I was doing that, I was doing that within Huon Aquaculture and providing that data. We were getting the nutrients tested by the AST Labs.

**Ms FORREST** - Were they verified by another organisation?

**Dr O'BRIEN** - Yes. What you have to go back to, in all of this, is the work that CSIRO and IMAS have been doing around that farm. They had been doing all this kind of work. They can show you CSIRO put in a probe that just wandered around the farm at relatively high stocking density. They will confirm that it is in a couple of hundred metres, up to 400 metres, those kind of ranges, where you can actually just about measure some nutrient. After that, you are back to background straightaway. It is not rocket science. There is so much exchange that you are really going to have to build up an industry to a very high level to really affect a change around those kind of areas. That is why Huon has chosen to move into those kind of areas, because it knows that it has a safety net there.

**Ms FORREST** - Which is quite different to Macquarie Harbour. Obviously, that doesn't flush so well.

**Dr O'BRIEN** - Yes. At Macquarie Harbour, the bottom waters, you are talking more than 100 days before it flushes, and then you've got Huon Channel, 16 days, then you've got Storm Bay, less than a day. It's a massive factor in siting these farms now offshore.

The industry has had to develop. Over these 25 years it was small. It didn't have the facilities to actually go out to this kind of - if you want to call it semi-offshore. We call it offshore because of the conditions that you can experience there, and those are the waves basically that can come through there every now and again. But, for Storm Bay, you really needed the big equipment that Huon now has before you can move there. But, now they've got it, it's a really good environment. The fish like the environment as well. It's a very fresh -

**Ms FORREST** - Just on that - one of the big concerns about the current farms in the area and expansion is the light and noise. I know that's not probably your area of expertise, but you've got to consider the whole impact, so the marine impact is certainly important. You can't actually physically see that, not when you're just looking. But, the other is significant too, the visual and noise light. Do you have any comment on that?

**Dr O'BRIEN** - I have been involved with noise and light in the past. I haven't for the last two or three years. It's an area that you have to closely work with the community about. If there any ways, reasonably, that as a company - this is how I've understood Huon has worked at this - then you try to make corrections to whatever systems you have to try to decrease the noise, the lights, anything that might be disturbing people. Especially out of work hours' time.

There's a great effort being made in that regard. The only way that you can really step through that process is to do as much community engagement as you can. But there has to be a stage that you have to accept. If we're going out there and this is happening, this is what's going to happen. And you certainly have to have emergency provisions so that you say, well, we've had a huge storm out there. If we don't get these boats in and out of there very intensely over the next few days we won't be able to make all of these corrections that will stop things falling apart, et cetera. If that was to occur then you have to make emergency provisions as well.

**Ms FORREST** - That shouldn't be the norm?

**Dr O'BRIEN** - No, it shouldn't necessarily be the norm. You'd always be planning not to try to disturb other people and the environment, yes.

**Mr VALENTINE** - I just want to clarify. When you were talking about flushing times, and you were talking about 16 to 20 days, was that the D'Entrecasteaux area in terms of flushing?

**Dr O'BRIEN** - Yes, the whole Huon-D'Entrecasteaux system, yes.

**Mr VALENTINE** - Okay. When you said CSIRO didn't have any measurements for Storm Bay, or there was no flushing time required, had they been actually measuring flushing

times at that point? Or, are you saying they simply didn't measure it because they knew that it a high turnover?

**Dr O'BRIEN** - They've done quite a lot of work about the flows and how waters move within Storm Bay. They've got a good enough background to know that for waters as open as that it's not - maybe it's not a relevant measure, if you like, for them at that stage. That's what it felt like. It said, oh, look, you know, it might be a couple of hours, it might be this but it's not actually relevant like it might be to a D'Entrecasteaux and Huon system where obviously that was in the modelling for them when they modelled the Huon-Channel system.

**Mr VALENTINE** - When you are doing measurements in the Storm Bay area, what were you measuring for? Were you measuring for dissolved nitrogen? What were you measuring for?

**Dr O'BRIEN** - Yes. We were doing the - I'll call it the full suite of nutrients: phosphates, nitrates, ammonia - the ones of concern - silica. Then we were doing dissolved oxygen. We were taking - and we were doing that at different depths. So, we'd do it at sea floor, midway up and at surface. We would do some control sites in the middle of the bay as well.

**Mr VALENTINE** - Did you look for heavy metals?

**Dr O'BRIEN** - I have been involved in the past looking for heavy metals, comprehensively.

**Mr VALENTINE** - But in Storm Bay, in the Storm Bay?

**Dr O'BRIEN** - In Storm Bay, yes, that was all done through baseline.

**Mr VALENTINE** - Baseline?

**Dr O'BRIEN** - A lot of samplings on the baseline for heavy metals, yes.

**Mr VALENTINE** - Okay. So who undertakes that?

**Dr O'BRIEN** - Whoever does the baseline study. Now it could have been, it would have Aquenal. It could have been me but I think that, that was Aquenal but we have done four or five baseline studies now in that area because every time we have a new section we have to do another baseline study. Huon would have baseline data now for an extensive area and huge baseline and heavy metal analysis.

**Ms FORREST** - Over how many years?

**Dr O'BRIEN** - The last two years, three years. They would have it for five years ago as well when Huon's first farm started up as well. But the relevance of that here and there, because it is a very sandy environment, you would expect very low heavy metals out there.

**Mr VALENTINE** - Are you able to tell us any information on heavy metal sampling there?

**Dr O'BRIEN** - They are very low. I do not have that in front of me and I cannot remember what it was but it was low enough for us not to be concerned.

**Mr VALENTINE** - Thanks for that, I appreciate that.

**CHAIR** - In terms of heavy metals that brings up the intersection of the Storm Bay growth and development of the farms and the interaction with the Derwent Estuary. The concerns raised there are not what would have been there as a baseline but the fact that putting in nutrients into what may then interact with the Derwent Estuary will liberate heavy metals that have been kept in the sediment and stable in the sediment.

**Mr VALENTINE** - Resuspension.

**CHAIR** - Resuspension. So do you have a comment on that or can you offer your reflections on the concerns raised through the Derwent Estuary Program.

**Dr O'BRIEN** - If a person comes with that argument you really have to ask them what is the mechanism for that happening? I have no explanation of any mechanism that could possibly make that happen.

**Ms FORREST** - Putting anchor points in for the pens?

**CHAIR** - Nutrients in the water resuspends the heavy metals.

**Dr O'BRIEN** - If it gets into the Derwent Estuary all the way up there when you cannot measure any nutrient increase beyond the few hundred metres, what is the logic that is put behind that kind of claim? There is no logic to it, I'm afraid.

**CHAIR** - Can I take us a step back to the Sustainable Industry Growth Plan. We are involved with the industry at that stage. Were you involved in feeding into and developing that plan from the industry side of things?

**Dr O'BRIEN** - I had nothing to do with it whatsoever.

**Ms FORREST** - Were you a Huon employee or -

**Dr O'BRIEN** - No, I was a consultant to Huon but given that I worked in the areas for them in the environmental monitoring but even more importantly site selection, I was never consulted on the site selection. It felt to me at the time that industry as a whole, it felt like government wanted to go alone.

**CHAIR** - Can you talk about that a little bit more. You are saying that in terms of the grow or 'no grow' zones that are in the plan when it came out and deciding where potential areas for expansion were that, that was not industry driven that, that was from government?

**Dr O'BRIEN** - From my experience at Huon we had no say in it at all, certainly at my level.

**CHAIR** - However, the industry did have an aspiration in terms of a growth target, that $2 billion by 2030 growth target was from industry and government came into support that. That is what we have been given to understand.

**Dr O'BRIEN** - I could not comment on that, to be honest with you.

**CHAIR** - So industry did not have a sense that here is our growth target and time frame and therefore here are the sites that we are interested in to achieve that growth target. Are you saying that that is not what occurred?

**Dr O'BRIEN** - I never really heard; I was not involved in any discussions like that, so I honestly do not know. I can just take your word for that having occurred to be honest with you. It seems like a very reasonable thing to do is to plan for the future and understand where industry is going and then try to -

**CHAIR** - We are trying to unpick how the planning has occurred in terms of who has driven it and at what stage have different stakeholders and groups become involved in that planning process, and on what basis have certain targets and aspirations been made. So it does not sound like you can assist us in that.

**Dr O'BRIEN** - I would say that at a technical level I was not aware of any meetings, I was not invited to any that would have been the people who had the expertise in the site development area being involved in discussions.

**CHAIR** - I want to talk to you about data availability and public access to data. That is something you would have been involved in within the industry, the collection of data and analysis and use of data? From your experience, in terms of the data that is put into the public domain and what isn't put into the public domain, what do you see as where we sit at the moment as a state, and where we would have the opportunity to approach that differently potentially?

**Dr O'BRIEN** - I suppose what frustrates me more than anything, being a marine biologist and being a trained marine biologist, you have the biggest percentage probably of marine biologists in the world per capita in Hobart. You have some very able and very good scientists here. The industry has used them for 20 to 25 years and I really baulk at the fact that their work is being mistrusted in any way. I think it is the interpretations that we take out of their work. They are doing a fantastic job. Some of the work we have had done by CSIRO in support of all of the developments of the industry have been really helpful and useful to the industry and IMAS as well. All of the environmental monitoring they have gone through and recommendations they have made and changes that they have influenced, have been very important to the industry.

From an industry point of view, I felt there has been a big gap between saying if the government and industry require some work to be done that it is defined properly, this is why we are doing it, this is what we hope to achieve. At the end of that, that information is presented properly with the conclusions coming from these independent scientists, who are top of the range in their science fields, and that is presented to everybody in the public and then it can be discussed. If there are people who feel it is not accurate, or they have an opposing opinion, that can then be debated at that stage.

The important thing is at some stage, whether it is the EPA or another realm of government - I would prefer it to be the EPA so we know exactly what the EPA is wanting all the time - that they stand behind the science that has been provided.

It is like when I come to you now and we are talking about these nutrients and, at the levels of development we are looking at here, it is 40 000 tonnes. I have tried to give you some confidence that it shouldn't be a problem, that the work we are doing now to take it past 40 000 if it ever needs to go past 40 000, that should take a reasonable amount of time, should develop itself on work that it already being done, all the monitoring and all the research that is being done around the grounds, developing up to the 30 000 to 40 000 target, and then you will know and then you will be safe to continue past that point if that should be required.

I want to emphasis here that it is not only the Storm Bay area and the possibility of moving further out, if the equipment can take it, a really good environment to grow fish, but it's to be clear that if you don't get the biosecurity aspect of the whole industry in order as well, then that will be its major problem going forwards within an area like Storm Bay and indeed in the areas it is already farming in. It is important that through all of these processes we are going through now that the biosecurity of the industry and the fish themselves is paramount.

**CHAIR** - Bringing you back to the data, there is general acknowledgment that a certain level of transparency and accountability can be achieved through the sharing of data, and reporting on data is something that promotes community confidence. That's why even, say, in the growth plan there is a data portal proposed which to some extent has come to fruition and will continue to be refined or improved. It sounds like you are saying people shouldn't necessarily need to have access to data or information and that they should take it on trust, that we have good scientists doing this and accept an end decision or an end-point assessment.

**Dr O'BRIEN** - No, I think it is both. There isn't enough support for the scientific community here and their independence, and that their science is peer-reviewed science. And the fact that you can't have just anybody who doesn't understand that fact coming forward and claiming it's not right, they're biased, they're working. They're not. It's peer-reviewed science by independent scientists in IMAS and CSIRO, and that has to be made clear and we have to move forward once you accept that. You can't make arguments that have no scientific basis on them any more for this industry. That can't be done.

It's like I gave you the example before, of releasing the heavy metals up the Derwent, and I emphasise 'up the Derwent'. There's got to be mechanisms, there's got to be science behind it, that makes that a real possibility. You have to play with the risks when you are doing any of these kind developments. That is just not one risk you should be looking at.

**CHAIR** - But you would accept though, I imagine, that the transparency and accountability around data becomes a way to avoid opportunities for people to come forward with spurious arguments, or non-scientific assertions because in sharing data and being open and transparent that takes away any foundation for people to come forward with those things and perhaps it's an absence of that that has led to some of those things arising.

What I'm interested to get from you is - I've heard you make the argument that the science is robust and can be trusted. I'm interested to know what your thoughts are on how we could improve transparency and accountability around data and information-sharing. From your

experience in the industry, what could be done better in that way to get the outcomes that in fact you're suggesting we want to achieve?

**Dr O'BRIEN** - I would agree that a lot more data should be freed-up and presented and provided. I think it probably should be provided eventually through the EPA. The companies themselves, and I think Tassal and Petuna are the same, present a lot of data. The data they are presenting has been collected in general by scientists as well. I can understand that the community may not want to believe that straight-out, but I think the EPA would have to be the vehicle for presenting data to the public. It has to come through them, verified by them, with their own other data behind that as well at the same time.

Also they have to acknowledge where they sit at that time, both with the studies that have previously been done and the studies that they are showing are about to be done, and that that data will also be provided once those studies are completed. But it's no good if it's left hanging - 'oh here's the studies by IMAS, interpret it yourselves'. I think that as a government department they've got to show that they've interpreted it. They've got to show that if that's what it shows, if they agree with those conclusions you've got to agree with it. Basically, it means that the people who don't agree now have to also provide a reasonable basis for any counterclaims, et cetera, or else we just keep going around in circles.

**Mr VALENTINE** - I'm interested in drilling down a little bit into the issue that you are pointing up about biosecurity. You are talking about Storm Bay being an ideal environment to be able to grow salmon and finfish, but you said biosecurity is the big issue. Obviously, there was an event where they took some salmon down to Norfolk Bay, I think they called it the hospital site, or whatever. What are you saying needs to change in the Storm Bay environment to avoid that sort of an event from happening?

**Dr O'BRIEN** - I've been nine months out of the industry. Nine months ago where we were was that industry was coming together with government to try to understand how better it could manage the whole industry in all its areas of development - not just development, where it stands at the moment. The Huon and Channel, Storm Bay, everywhere where the industry exists at the moment. To try to understand how best it could site the farms so that you would have a decent gap between year classes and a decent gap between companies. Separate companies especially.

For Huon, I don't think that the Storm Bay example works quite well enough. They were comfortable at that time with the gap between us and Tassal but when it came to the third company coming in, Petuna, started to dive across into the middle of that area. That is a problem for Huon. It is not its ideal look what should be done for biosecurity.

**Mr VALENTINE** - What sorts of gaps are we talking about here?

**Dr O'BRIEN** - Probably the gap from us to Tassal has been measured on - you would have to go through people like Steve Percival back at Huon again to check on what the latest information is because he has been working solidly in that area. But certainly at that time, the gap between us and Tassal looked to be appropriate.

**Mr VALENTINE** - Which is?

**Dr O'BRIEN** - In the past we have looked at it in terms of how many tidal excursions. The tide will take it a certain distance in one excursion and then the next tide will take it further. It is probably a couple of tidal excursions and sometimes in these kinds of areas it will be six kilometres, that sort of thing. Don't quote me on the exact number.

**Mr VALENTINE** - No, you have been out of it for a little while. I understand that.

**CHAIR** - Now that has been significantly reduced because of the third company going into the same area?

**Dr O'BRIEN** - Yes. That was my understanding nine months' ago.

**CHAIR** - We have heard that concern too.

**Dr O'BRIEN** - Can I say as well, for the tonnage of the cages, it varies considerably at the moment and I would get verification back from Huon for that one.

**Ms FORREST** - As to when the monitoring was done?

**Dr O'BRIEN** - No. It was full stocking. Off the top of my head I am not sure what the tonnages were at that stage.

**CHAIR** - We won't hold you to the ballpark figure you provided. Obviously, you are quite firmly of the opinion that the Storm Bay environment is a preferable environment to an inshore environment. Would you see it as an appropriate aspiration to be able to step away from some of the inshore arrangements that have been there for a while but have had their limitations and if brought forward today, may not be chosen ideally as sites, and transfer to those more offshore sites? Not just add them, but actually transition to them?

**Dr O'BRIEN** - We are in a transition phase at the moment. The fact that Huon has gone for four or five years now, nearly, farming where they are in Storm Bay is every positive. We are going to take a few more years to understand exactly that we can keep everything in control at all times.

That environment has produced problems in the past, such as causing parts of the cages to break free, et cetera. So the latest design of cages is looking good now and seem to be holding up well. We need a few other storms to come through. There is a high deal of confidence but you would want a lot more confidence before you start moving it all out into those kinds of areas.

The inshore areas as they sit, are actually easier to work. They give a lot of advantages. They are much better for smaller fish until you get up to the larger fish size, and they also provide a lot of advantages for the larger fish when they are being brought back into the Huon and Channel. The Huon and Channel has been good to the industry in that regard and so I wouldn't see a mass movement out of the Huon and Channel in the foreseeable future. But anything would be on the cards if it started to really grow as well as they seem to be doing in Storm Bay and into the future.

There will be a few more developments of technology before that as well. Bigger systems that may go even a bit further offshore, although you can't be too far offshore because you still

have to go and pick up the fish and bring them back in. What I would say is that the Huon and Channel is a valuable resource to the industry. Certainly, Huon is of the mind that there should never be any increases in production in the Huon and Channel at all. Certainly, at the limit we are at the moment, it is working pretty well right now but we shouldn't get overconfident and we shouldn't expand.

**Ms FORREST** - Shouldn't expand in the Huon?

**Dr O'BRIEN** - No.

**Ms FORREST** - One issue is around the release of data. The current legislative requirements mean the EPA can receive the data from the industries but they can't release it to the public without the approval of the third party, which is likely to be the industry or could be another consultant who has done work for an industry. When asking questions about various aspects of data, often we are told there is commercially sensitive information - some of it I would question as to whether it is commercially sensitive or just maybe a little bit embarrassing.

What is your view about the more open release of data? Legislation has been consulted - I do not know where it is at, it is a matter for DPIPWE to ask when they come - but looking at this one of the aspects of that is enabling a more proactive release of data to the public.

**Dr O'BRIEN** - My understanding of Huon's position is that it has no problem really with the release of data to the public done in a reasonable fashion and through the right avenues, such as say through the EPA and data then that has been checked very finely and then put out to the public. I do not think Huon has too much of a problem with that.

Where sensitive data comes in it is where some studies have been carried out where stocking data, the amount of fish across the whole lease, et cetera, that then is more difficult to release. It may be that part of the data cannot be released like that because it is commercially in confidence data. It is stuff that you do not want to go to the other companies. It is stuff that we provide to the researchers and then they research and then they calculate stocking rates, et cetera, based on that and they come back with a figure. But they do not say what the actual amount of fish per pen or amount of fish per site, what size they were, because that gives a really good clue to other companies what company is doing what work. That is probably the area that is of most concern.

**Ms FORREST** - So then things like mortality rates or mortalities above - I think the level is a bit high for reporting but that is a personal opinion - the mortality rates, fish escapes, and things like that. Often when I have asked questions on behalf of the public I have been told that it is commercially sensitive. How can that be commercially sensitive?

**Dr O'BRIEN** - It can be commercially sensitive at times. It is not an area that I deal with. I have just come across that issue, obviously, at different times when I have been working within the industry. It is commercially sensitive if there is a reasonable amount of fish has been lost by one company the other companies can make benefit out of that.

**Ms FORREST** - Doesn't the public have a right to know about? We all know because they get caught in the river. Not all of them.

**Dr O'BRIEN** - Yes, you are right exactly. There has to be a way that this can be presented in some way to give the public more reassurance of what is happening. Maybe it can be done through the EPA in some way, but I cannot suggest what way that might be. It would be more for the heads of the companies really to give advice.

**Ms FORREST** - So if we are talking about, say, stocking densities, potentially a number of fish escapes or mortalities, arguably, they may have some commercial sensitivity around them. The monitoring data around the nutrient around the pens, how far you go from the pen before it is back to ground levels, that sort of thing, does that have any commercial sensitivity around it?

**Dr O'BRIEN** - No. Not in my view.

**Ms FORREST** - Are there any other areas besides the stocking densities and number of fish escaping or dying, that would warrant commercial sensitivity in terms of the data?

**Dr O'BRIEN** - Not that I can think of off the top of my head.

**Mr VALENTINE** - What about nutrient levels and things like that?

**Dr O'BRIEN** - I do not see any problem with that, no. I think that the industry should be able to show those kinds of results at all times, yes. I think that the future is getting into automated monitoring systems that you just put out at sea. It's not too far off until there will be beacons out there, and they will be doing the measurement ongoing. They can be made available over websites.

**Ms FORREST** - Arguably, with Wikileaks and things around, that all manner of data, in all sorts of areas can sometimes be released. The more that is out there, the less finger pointing can go on. Whether people can actually understand the data is another question.

Are there benefits in a much more proactive approach to getting information out there? The data pool [?] was supposed to be part of that. Do you see any downside to a much more proactive, open release of data, including monitoring data, and things like that?

**Dr O'BRIEN** - As long as it's explained what the data was collected for and what it was looking to try to identify as either a problem, or a benefit, or whatever, then no. If it is not clear, and it is just data for data sake, it could be used and analysed and then not understood why it was collected in the first place, it might not actually be telling the story. Then that person -

**Ms FORREST** - So, context is important.

**Dr O'BRIEN** - Context is extremely important. That is why, going back to the point of a body like the EPA standing behind the data it has commissioned and the science that it has commissioned.

**Ms FORREST** - Currently, as I understand it, they need to get permission of a third party before they can release any of it. While Huon may have said 'yes' the majority of the time,

perhaps, you don't know what you don't know, so, you can't speak for the other companies, obviously. It seems to be a bit of an issue for some.

**Dr O'BRIEN** - I would hope it's getting better. I mean, it has to.

**CHAIR** - Thanks so much for coming in today to the hearing. We appreciate your time and you sharing your expertise and experience with us on this topic, which is quite a complex one, as you would be well aware.

**Dr O'BRIEN** - We scratched the surface.

**CHAIR** - We did, indeed. Thank you very much for that. We appreciate it, and we will finish it up there.

**Dr O'BRIEN** - Thank you.

**THE WITNESS WITHDREW.**

**The Committee suspended from 10.32 a.m. to 10.45 a.m.**

**Mr TIM BAKER,** ACTING SECRETARY, **Ms DEIDRE WILSON,** DEPUTY SECRETARY, **Mr COLIN SHEPHERD,** AQUACULTURE COORDINATOR, **Mr GRAHAM WOODS,** MANAGER OF THE MARINE FARMING BRANCH, AND **Dr LLOYD KLUMPP,** GENERAL MANAGER, BIOSECURITY, DEPARTMENT OF PRIMARY INDUSTRIES, PARKS, WATER AND ENVIRONMENT, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

**CHAIR** - Welcome. Thank you for coming back to see us for another hearing. I am Meg Webb. I think we have all met previously. Rob Valentine is here with me, Ruth Forrest, and Mike Gaffney has joined us through the audio facilities.

As you are aware, this public hearing of the Government Admin A Subcommittee Inquiry into Finfish Farming in Tasmania is being held with evidence being taken that is protected by parliamentary privilege but outside of the hearing may not be afforded such privilege. We are being recorded and there will be a *Hansard* version available and published on the website and we are also being broadcast today.

We are going to proceed as normal and have you all swear-in. If you would like to make another opening statement we will then follow that with some questioning across a range of areas. If there is anything that needs to be dealt with in camera, please make that request and we will consider it at the time. Thank you.

**WITNESSES SWORN**

**Mr BAKER** - We do have couple of members behind who may be needed. Will we just swear them in as needed?

**CHAIR** - If they happen to need to come up we will deal with that then.

**Mr BAKER** - I will make a couple of brief opening remarks. Thank you for asking us back to the inquiry. It is good to be here. We in the department are always willing to come to any inquiry where we have been given appropriate notice and where it relates to the operations of our department. So I am very happy to be here. I am happy to be here representing the department with the subject matter experts I have at the table and behind me.

As I mentioned last time, we are a department that is focused on continual improvement so we welcome the review and we look forward to having a look and happy to review any recommendations that come out of the inquiry. We can do better and we will do better. In fact, in the time since we last met, there are a number of things that have changed and improvements we have made. I would like to talk about those vary briefly.

The first thing on my list is that all floating marine equipment is now required to be uniquely marked and can be traced back to the operator and - based largely on a conversation we had here - we have established a single point of reference for responding to notifications of marine debris and that system was developed in consultation with MAST, Friends of Bruny and the companies themselves.

The government has announced and we have commenced work on a spatial planning exercise for state waters to look at future growth opportunities as part of our second review of the Salmon Growth Plan. We have created a new Marine Resource Division with singular

focus on marine resources for the first time in our department. Biosecurity, led by Lloyd Klumpp at the table today, has done a power of work on the draft Biosecurity Plan and Biosecurity Standards for Finfish and it is virtually complete and we can hear some more about that today with secondary stakeholder consultation under way and Biosecurity has secured $6.9 million for a five-year Salmon Health Research and Development Program, all of this undertaken since we were here in February.

Having looked at the *Hansard* I do think it is important that I spend a couple of moments very briefly explaining the role of the department as represented here today.

We are responsible for marine farm planning. We are responsible for biosecurity and animal welfare. We are responsible for wildlife management, and we are responsible for freshwater hatcheries.

It's also important to note that the department as represented here today is not responsible for the following: the regulation of environment impact of finfishing - that's the responsibility of the EPA and my colleague, Wes Ford, who I know has been here a couple of times himself; changes to government policy and legislation - that's the responsibility of the Tasmanian Government; and commercial decisions relating to the operations of finfish farming in Tasmania.

As I mentioned, I've brought with me representatives from the areas of the department for which we're responsible and, as always, they are better placed to answer the technical questions than me. Having read the *Hansard* I would say I will try my best again this time to let them answer the questions where it is detailed. Where we can't answer a question, I am more than happy to take that on notice and we're happy to do that again.

In closing, I do think it is important that the department puts on the record our strong view in relation to the salmon industry. The first point I would make is that it's the department's strong view that the salmon industry is an environmentally sustainable industry, particularly when assessed against the acts the department administers.

I also make the point that it is our strong view that they are operating on the world's-best advanced science supported by IMAS, CSIRO and other leading national and global research experts. I also make the point that the salmon industry provides unparalleled economic and social value to the Tasmanian community, particularly when compared to other Tasmanian primary industries.

Finally, I make the point that the salmon industry and the department is forward-looking. No more is this more evident than through our relationship with the Blue Economy CRC, a $330 million joint venture between more than 40 government industries and research partners.

With that said, I'm happy to take questions. Sorry, there is one last point, thank you. Two points. This is my first time on the public record, and it does relate to our hearings today, where I should thank the salmon companies and our staff for the extraordinary effort they made in Macquarie Harbour in saving, I think, what ended up being over 100 whales. Without their help and at their own operational cost there would have been more whales die and it would have been far more difficult for our staff. I do think it is important that I put that on record.

In terms of who's with me here today, thank you Colin, I have Mr Graham Woods and Ian Dutton from the marine farming branch, Dr Lloyd Klumpp, who you would know from Biosecurity Tasmania, Dr Kris Carlyon [TBC], who's just back there, from the section head for Natural and Cultural Heritage division, John Diggle from Inland Fisheries, and Deidre, my deputy, and Colin Shepherd who looks over the aquaculture. I also have Dr Rachel Alderman, who's the branch manager for threatened species conservation programs. So, we've got a crowd with us today.

**CHAIR** - Welcome everyone.

**Mr BAKER** - Thank you. Happy to take questions.

**CHAIR** - A plethora of expertise in the room for us. Thank you.

As you would imagine, we covered a lot last time and today we will mop up some things around the edges of that and expand on some of those things no doubt as well.

Picking up on one of the things that you articulated there in terms of the department's view on different things. You talked about the industry being of value to the Tasmanian community. I'd like to hear a bit more about that from you in terms of levies and fees, and how those are currently structured, how they have developed, and what the intention is in terms of how the arrangements around fees and levies will work into the future as the industry further grows.

**Mr BAKER** - Sure. So, I will make opening comments and I'll allow Colin to make a few comments as well. The first thing I'd say about levies and fees is they are set in the relevant legislation and in effect they're enforced by us. Decisions around whether the fees and levies are correct, or how high they are, are really a decision for the government because they are set in the relevant legislation.

What I would say though - and just to give you a headline number - it's about $3.7 million a year in revenue, notwithstanding this year, given the COVID situation that we had in place, so, $3.7 million from the relevant legislation. Decisions about whether that level is right or correct is a matter for government.

I make the point that the department on behalf of the government reviews all operations to do with the finfish industry, just like it does lots of other industries. It is my expectation, and I think the government's expectation, that we will be reviewing fees and levies as part of that ongoing review on behalf of the government. The final decision on what the fees and levies should be resides with the government.

**CHAIR** - In terms of that, final decisions aside, what are the determinates that are considered when looking at the issue of fees and levies? What factors are feeding into that understanding and then final decision the government makes?

**Mr BAKER** - Some of the things we look at, or we will be looking at, is the level as compared to other industries, the level as compared into other jurisdictions. Granted there are not many other salmon jurisdictions in Tasmania, but there are other finfish jurisdictions. From there we would make a recommendation. The best example I can give you of this in a different industry is if you look at what we did with securing our borders with biosecurity. We reviewed

the current levies - Deidre can talk about that because she was in the department at the time - we assessed it against a number of factors similar to the ones I have just described. In the end we moved on those fees. It is standard business practice for us to review all operations of finfish and all operations in lots of industries. It is my expectation that we will be reviewing the fees at some point in the near future.

**Ms FORREST** - With the fees and levies, aren't most of them in the regulations?

**Mr BAKER** - Yes.

**Ms FORREST** - When are the regs up for review, because that has the 10-year sunset?

**Mr BAKER** - Good point. We can come back to you with that. What I am saying to you, Ms Forrest, is that it will be outside that standard review.

**Ms FORREST** - You are doing a separate review?

**Mr BAKER** - Yes, I think that is fair to say. It is fair to say that it's been a while since we looked at the fees. As I said, it is the Government's expectation that we will be doing a review of fees on their behalf in the near future.

**CHAIR** - In terms of that $3.7 million which you mentioned from last year, balanced against what it costs to regulate the industry and what other subsidies or other ways the state government spends money in relation to this industry, how does that compare?

**Mr BAKER** - I don't have the comparative numbers in front of me. By way of description there are three sets of fees, for lack of better words. There are licence fees, there are lease fees, and then there is the levy. What I'm suggesting is all will be looked at as part of the review. I am happy to come back to you on notice, Deidre, on how those fees compare to other industries.

**Ms WILSON** - Through you, I think the specific question you are asking is around cost recovery. You would be well aware that Treasury has guidelines relating to fees and charges and cost recovery. That is one of the key issues we looked at when we looked at the review of fees for securing our borders under the plant quarantine regulations. That process would look at the cost of doing the regulation compared to the fees. That would be part of any review we do of fees, because that is a baseline. And then if there were any changes to regulations, as you would be well aware that would likely go into regulatory impact statements. Tim is talking about the standard process that would be undertaken if there was to be a decision to make any changes under regulations.

**Ms FORREST** - Are you limited to cost recovery or can other decisions be made? Obviously those policy decisions be made by government, but are you limited to cost recovery?

**Mr BAKER** - No we are not.

**Mr VALENTINE** - Just with respect to this, it has been asserted that the fees are set before stocking densities are worked out. Is that true?

**Mr SHEPHERD** - No, I would not accept that is true. The marine farming planning process has the management controls and those management controls are where the stocking densities have been articulated. I think potentially what you might be suggesting is that the -

**Mr VALENTINE** - It is not me suggesting. It is a submission we have received.

**Mr SHEPHERD** - The biomass and the TPD allocations are not set prior to the fish going into the water.

The stocking density is a management control. It talks about 15 kilograms per cubic metre, or 25 kilograms per cubic metre. That is in marine farming plans. But, then, within the licences, the biomass determination that is made by either the secretary or the independent director of the EPA is set after the plans have been approved, because management controls within the plans talk about allowing a biomass determination or a TPD allocation to be set.

I think that is probably the reference you are making.

**Mr VALENTINE** - It came in one of the submissions. I guess what is in their mind is the stocking density has a lot to do with how much return a company gets. Therefore, their capacity to pay licence fees, that might reflect that return.

**Mr WOODS** - The lease fees are geared to a base fee and then a per hectare amount. The key factor is the hectares occupied by that lease. It is not geared to the stocking density or production volume of that lease area.

**Ms FORREST** - The lease size, not the pen size?

**Mr WOODS** - That's right. There is a base fee and then a per hectare amount.

**CHAIR** - Continuing on fees and levies. We don't currently have anything that looks like a remediation fee, or a levy that is required from industry relating to their sites. Is that correct?

**Mr WOODS** - To the best of my knowledge there is no remediation fee.

**CHAIR** - Is that something that is being contemplated, when fees or levies or these arrangements have been reviewed or determined?

**Mr BAKER** - My simple answer to that is, all options are on the table. We will be reviewing fees. If we review fees, we will review the way they are collected, how much, and the methodology calculated for how much. That is what we would do. For any industry. Not just for salmon.

**CHAIR** - Would the department, in that, be consulting externally with industry and with other stakeholder groups?

**Mr BAKER** - Yes, that's consistent with how we have done it for other industries as well.

**CHAIR** - In terms of other stakeholder groups, what might that encompass?

**Mr BAKER** - As I said, I think we're at the start of this journey, but if the salmon plan is anything to go by, industry participants and also, potentially, all affected parties is generally how we would do it. We would be very open in how we reviewed.

**CHAIR** - In terms of an affected party being the Tasmanian community, there'd be some availability then for community representation or input into that.

**Mr BAKER** - Given that biosecurity was the last one to be done, Deirdre, it's probably worth spending a few moments, very quickly, talking through the process we used for that. I think that will give you a good understanding of the approach, which is generic in their department.

**Ms WILSON** - That commenced with an internal review to gain an understanding of the costs of undertaking the regulation. It also, in that case, looked at what other future services we needed to provide protections at the border. That is why we called it Securing Our Borders, but of course it was related to regulatory changes.

That used our internal expertise in the first instance, to understand the model that we wanted to introduce. The costing for that model. Then we used our internal economists to do some quite detailed work. Then, obviously, there is a decision that is made in government about whether that is to be pursued or not.

In this case, because it was a change to regulations, it went through the standard regulatory impact statement process. There was extensive consultation. We wrote to - I can't think how many, it was 400 - all impacted people that we were able to get from our list. Those that had a fee that might be applied to them. We also released the regulatory impact statement for public consultation. You are very well aware of the process when regulations are going through parliament.

One of the key things around that process, though, was in undertaking that detailed analysis, we looked at where the cost should apply. It was a tiered approach in terms of cost recovery, in that instance. In terms of freight movements, as compared to inspection of fruit and vegetables. I point that out, because when we are doing this kind of review, it's not just the policy intent, but it is also impacts that need to be understood so that when you are doing a cost-benefit analysis you are understanding the breadth of the decision-making. In that case, it was very important to us that we got the balance right in terms of the economy and importers paying the price for risk, noting that those costs would potentially be attributed to consumers. It was quite a thorough process but it did start with quite good internal analysis using our expertise and economist. Lloyd, how have I summarised that?

**Dr KLUMPP** - That is a pretty good summary.

**CHAIR** - Thank you for that. One further thing on the fees and levies before we move off, in the current arrangements we have in place, not yet to be reviewed, can you indicate to us what part of that is consideration of the value of the use of public waterways and amenity?

**Mr BAKER** - I would say that is the intent particularly of the lease fee but ultimately that determination around value is set up in the regs and the relevant legislation.

**CHAIR** - So it is incorporated in the current arrangement that is there that is somehow reflective of the use, the value of the use of the public waterway?

**Mr BAKER** - The quantum of that and how it is determined is in the act and the relevant regulations.

**Mr VALENTINE** - My question goes to environmental disaster. Apparently, there is no bond that a lessee has to provide in the event of such a thing occurring. Can you confirm that and has that ever been a consideration of the department?

**Mr SHEPHERD** - I guess what I'd probably say is that in the most recent amendments and plans for Storm Bay, one of the modifications that was made allowed for the director of the EPA to impose a remediation or monitoring plan at the cessation of marine farming. So that now exists. And clearly -

**Mr VALENTINE** - That's your plan?

**Mr SHEPHERD** - Yes, a plan, but the plan would have an attendant cost, you would assume, attached to it. The plan would be set by the director and the director would determine what content he wanted in the plan that needed to be approved, and that would come at a cost to the proponent. That is the only plan at the moment that I am aware.

**Mr BAKER** - Further to that I think, Lloyd, we are under the Biosecurity Act.

**Dr KLUMPP** - We have built into the Biosecurity Act, the opportunity for what we call owner reimbursement costs. In order for those to be able to be implemented we will need to develop exactly that: some formal system for funding those sorts of provisions in the result of a major biosecurity event or disaster. That is a body of work still for us to do but we have the legislative mechanisms now there to do that. We haven't had those in the past.

**Ms FORREST** - While we are on legislation, the Environmental Legislation (Miscellaneous Amendments) Bill 2019, that was a draft and we have spoken to the EPA about it. Can you give us an update of where that is at?

**Mr BAKER** - Good question. That is one for Mr Ford. We will take that on notice and come back.

**Ms FORREST** - It leads into the next question around the data portal. In the explanatory paper that came out with it, it talks about the legislative barrier to releasing data by the EPA without the approval of third parties if it is related to third parties, and most of the data is third party data. It is either the companies, the consultants they use, or IMAS or CSIRO, which are all third parties to government, obviously. I am interested with the portal - why was the decision made to put it in DPIPWE? If you don't progress this legislation, aren't you in the same position: there is no power to publish it and it becomes a bit of a moot point?

**Mr BAKER** - I think we talked about this a little last time.

**Ms FORREST** - Yes, we did touch on it.

**Mr BAKER** - We have made a quantum leap in getting the portal up. We have put a large amount of data on to that portal. Have we still got more work to do? Absolutely.

I remember talking about our continual improvement methodology when I talked about this last time. There is absolutely more data that can go on the portal that should go on the portal. In the time since we have last talked, we have done a lot about making sure the data that's going up there is accurate and timely. But I would be the first person to say that there's more work to be done in actually getting more data onto that portal. I also ask you to acknowledge that we've made a big step in actually getting that data up there.

In terms of why it's in the department and not in the EPA, really I just think it's a matter of resourcing. So, we have the big department, and Deidre can talk to this, with a large team EPA is a lot more nimble and separate, so that was the logic behind it. As soon as we get those changes made we'll be looking to put that data up onto the portal.

I don't know if you want to add anything, Deidre?

**Ms WILSON** - My understanding, and Graham, correct me if I'm wrong, and please do, Graham, while we're sitting here, my understanding was the assessment was made at the time that there was a gap analysis done of what information was on the EPA website and what was also readily available on the IMAS website, FRDC. The gap that remained was around regulatory information.

As we collect the regulatory information, we are actually the appropriate repository for that data and the appropriate entity to understand what can and cannot lawfully be used and presented publicly. I take the point around what data can and can't be presented does come down to what lawfully you can do at a point in time, but as noted, there are obviously some moves to consider what data can be made more readily available. Graham, is that -

**Ms FORREST** - I'm cutting people slack because of COVID, but we do need to get on. If you want to answer I just want to follow up with one to you, Tim.

**Mr WOODS** - I guess in terms of the information that is on the portal, it all aligns with information that's reported or required to reported through statutory reporting under marine farming licences and environmental licences. It all aligns. The only, I guess, difference would be with marine debris reporting information

**Ms FORREST** - Through MAST?

**Mr WOODS** - No, it's voluntarily supplied by the companies. That relates to all their shoreline clean-up activities and all metrics around the amount of gear that's collected.

**Ms FORREST** - Have there been barriers then because this legislative gap, if you like, in publishing data that rightly should be out there?

**Mr WOODS** - I would say that certainly the act will allow for more data to be published. It was no small feat by Graham and his team to get the data portal up and running to begin with. You mentioned COVID-19 and it's probably the only time I would mention COVID-19 in terms of slowing down our progress in finfish farming.

If you're asking me will that change to that act allow for more data to be put up, yes it will, and it will be welcomed when it's passed. I don't know if you want to add anything?

**Mr WOODS** - No. I think that's right, Tim.

**Mr VALENTINE** - A question about pens: are they subject to survey? Is tethering arranged to take into account the possibility of whales encountering them? Those sorts of things now, given the fact that we've had all these beachings.

**Mr WOODS** - Are we talking about pens?

**Mr VALENTINE** - Pens, yes. Are they subject to survey?

**Mr WOODS** - Yes, under the provisions of the management controls for all Storm Bay sites, the lease areas must be subject to a risk-based assessment for all their systems and processes, including infrastructure.

**Mr VALENTINE** - In terms of the tethering of those pens, whales have been raised as an issue in terms of entanglement, and those sorts of things. When those surveys are taking place, is that taken into account in how they are anchored?

**Mr WOODS** - I guess that comes down to the engineering design behind those cages. Through the planning process, and consideration of interactions through the planning process, any entanglements or interactions with mammals are considered fully through that process. They take into account the proposed engineering design and specifications of those grids and cages.

**Ms FORREST** - How often are surveys carried out?

**Mr WOODS** - I guess the surveys - it's more so a case of doing the - checking the engineering specs. Ideally it is up to the companies to manage their infrastructure and ensure that they are appropriately designed and load tested, and that the array of their moorings is appropriate to hold their pens.

**Ms FORREST** - Is there a set standard for checking?

**Mr WOODS** - Each of the companies through their own audit processes manage and maintain that infrastructure management system. Under the management controls of the plan there is a requirement for the companies to provide that documentation for consideration by the secretary.

**Ms FORREST** - Including assessment?

**Mr WOODS** - Not mammal interactions, but the engineering and the risks for infrastructure in terms of breaking free and that it is appropriately moored and held.

**Mr VALENTINE** - Given we're talking about Storm Bay, it's a much more volatile environment in terms of weather. Is the strength of the pens and the tethering taken into account when the department issues licences in those areas?

**Mr WOODS** - Under the provisions of the controls, yes, the companies must provide that information. That is something that we are working through with the companies at the present time.

**Mr VALENTINE** - Members of the public can be assured that the strength of the weather experienced in those location is definitely taken into account when the licences are issued for pens to be operated there?

**Mr WOODS** - Correct. The systems and processes that each company has in place must be appropriate for the site conditions.

**Ms FORREST** - Is it a requirement to check the integrity of the infrastructure following a storm event?

**Mr WOODS** - There is no specific requirement for that to occur. Again, that comes back to the expectation that companies will check their infrastructure.

**Ms FORREST** - We do have the odd storm.

**Mr WOODS** - I guess that comes back to the management plans. The expectation is that as part of routine operations on the sites they would do that on a regular basis.

**Mr SHEPHERD** - We also have an inspection process. We are sending out our marine farm inspectors and MAST has authorised officers and the EPA has staff who are going out conducting inspections. As you can appreciate -

**Ms FORREST** - Above the water inspections?

**Mr SHEPHERD** - No, I am talking about inspections to make sure that the gear is appropriately located. Obviously that is a reflection of how it is being tethered and moored. We have a continuous program where we are checking on that. As you can appreciate, the industry has very strong motivation to make sure all their gear is appropriately set up. We are constantly out there checking. What we see on the surface is a reasonable reflection of what you would expect to see under water in terms of holding the gear in the correct location, including the corner marks and all the pens and all the other pieces of infrastructure.

**Mr VALENTINE** - Do you monitor the lease boundary markers and their location, and whether or not they are moved from time to time? Can you give us a bit of an understanding there?

**Mr WOODS** - As Colin has advised you, there is a standardised compliance program that we have for all marine farming leases across the state. Part of that work involves checking the position of all corner marks, checking the location of all marine farming equipment within the lease area, checking to see that there is no marine farming equipment extending beyond the boundary of the lease area and assessing compliance for that operation relative to lease conditions, licence conditions, and management controls contained within the plan. That occurs for every operation. We are cognisant of issues in Storm Bay and the exposure out there. We have had a large presence out there checking up on the corner marks, checking on

equipment, checking to see that it is not dilapidated and run down, because that poses a risk for breaking free. We are working closely with the companies on that.

**Mr VALENTINE** - How often would you do those sorts of checks on each lease area?

**Mr WOODS** - If you take as an example that recent August storm event, we have had staff on site at least twice.

**Mr VALENTINE** - Since August?

**Mr WOODS** - Yes. That is my understanding.

**Mr SHEPHERD** - Each farm would be visited at least once a year. In practice it would probably be more than that, but at least once a year as part of the regular inspections. As you can appreciate, the industry, in Storm Bay, operates in very exposed conditions.

One of the companies is taking a prudent approach, where they are trialling gear before they make a significant investment to ensure that all the things you are talking about are appropriate for the location.

**CHAIR** - Let's take a five-minute break. We're going to do that twice across the two hours we have with you today. We will stop the broadcast for the moment, and we will break for five minutes.

**The Committee suspended from 11.20 a.m. to 11.24 a.m.**

**Mr BAKER** - By way of clarification, or additional information, I have just checked. It is good for me to put on the public record, Mr Valentine, that there are very few, if any, interactions between salmon pens and whales. Just talking to the experts, the best we can indicate is probably one in the last 20 years. It is not common, but if there was a serious incident it would be reportable. They would have to report to us, if that helps?

**Ms FORREST** - A serious incident being?

**Mr BAKER** - With the whale. Injury or death basically, to the whale, would have to be reported.

**Ms FORREST** - So, a collision with a pen but without visible injury wouldn't be reported?

**Mr BAKER** - The advice from the experts is that even at the lower threshold in terms of just interaction, it is still very, very rare.

**Mr VALENTINE** - With the recent strandings in Macquarie, were there any interactions with pens and whales then?

**Mr BAKER** - I think you will find the answer to that is no, but we'll ask Kris to come and sit at the table.

**Dr KRIS CARLYON**, SECTION HEAD, NATURAL AND CULTURAL HERITAGE DIVISION, DEPARTMENT OF PRIMARY INDUSTRIES, PARKS, WATER AND ENVIRONMENT, WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

**Mr BAKER** - Before we start, Kris led the operations at Macquarie Harbour, so again on the public record, thank you for your amazing effort, mate.

**CHAIR** - We certainly extend our thanks to you as well.

**Mr VALENTINE** - I'm sure all of Tasmania thanks you.

**Mr BAKER** - So, the question was, how many interactions with whales with salmon pens? Not that I'm asking the question for you but …

**Mr VALENTINE** - In Macquarie Harbour just recently in particular?

**Dr CARLYON** - So, no interactions involving live animals that I'm aware of in the harbour. There was one incident where a deceased animal got blown in, or taken in by a current, and ended up interacting with a pen. That was the only one I'm aware of.

**Mr VALENTINE** - Okay, thank you. Simple.

**CHAIR** - Nothing further? Thank you, Kris.

Just to move on, I'm going to move on to marine debris for a little while, and we spoke about this briefly last time, but to go into a bit more detail. I noted that in your opening remarks, Tim, that you spoke about the fact that since February, I think, what you described is now that all buoyant marine equipment is required to be marked, as a further development since February. That's pleasing to hear because I wanted to pick up on the zero-tolerance approach that is outline in the plan. When we then spoke with MAST it doesn't seem to be the reality in terms of what's actually happening around notifications and identification, which then allows for infringements to be brought.

What was clear to us is without clear identification, that infringements are not brought against any companies, and a very low level of infringements appear to be brought compared to the notifications made. So, it's less of zero tolerance it would appear than a 'please do better if you can' sort of approach. Perhaps you would like to speak a bit more about what you genuinely mean by 'zero tolerance' and particularly when you expect that to result in less debris occurring?

**Mr BAKER** - I might start with Graham talking a bit about what we've done and our general approach and then I have a few comments myself to make.

**Mr WOODS** - As far as extending on Tim's introductory comments, we have been working closely with industry, taking on board community feedback and working with MAST in regard to the establishment of licence conditions. Generally speaking, there's overarching controls that relate to marine debris and management controls under plans in lease conditions, and under the provisions of the Marine Farming Planning Act.

To be really specific in terms of the marking of gear and those requirements, we've named those up in marine farming licence conditions. So, variations to licences across the board for all finfish companies around the state and all finfish leaseholders have been brought into effect whereby all floating gear must be marked, or if it's unique, it's not run-of-the-mill equipment, then that needs to be identified in a gear register.

**CHAIR** - Can you give us a broad understanding of what would come into that 'floating gear'?

**Mr WOODS** - Any floating infrastructure. For instance, feed pipes, water pipes. I guess those are the most common things that might break free from a lease area. Any other infrastructure such as cages, if it's a unique cage then I guess it's a question of identifying the cage and that's put on the register. We would not expect a cage to drift out of the lease area obviously. But any other floating equipment needs to be stamped, marked, appropriately. If it's a unique mould, for instance, a lot of the plastics are HDP plastics, they go through a mould process in their construction. Some of those moulds are unique to specific companies, so it would be a question of a company identifying that mould characteristics in their register.

We have been working with all the companies and they have done a great job of putting together and documenting all of their equipment. Those registers, under the licence conditions, now have to be reported to us.

**CHAIR** - It is now a requirement?

**Mr WOODS** - Correct. As is the requirement to mark floating gear. There is the traceability element now is covered off and it is explicit.

**CHAIR** - So you are not expecting any more that only one-in-10 of notifications of gear that looks like marine farming gear is not going to be identified?

**Mr WOODS** - There will still be instances where there is gear that might have been, for instance, washed up on a piece of shoreline that has been there for quite some time, way outside the window that we are looking at. It might be rope that is very frayed and broken down. We can't trace that back. The other thing we are keeping on the register is rope because it could be attached to floating equipment that then drifts outside the lease area. The expectation is very obviously, and again companies have been proactive on this, that they maintain a rigorous system of auditing their gear, making sure it is all contained on site, and they have also taken active steps to improve the traceability and looking at tracking devices and so forth on their equipment as well.

**CHAIR** - What requirements do you put around smaller equipment, small buckets, earplugs, those small bits and bobs?

**Mr WOODS** - Earplugs, as far as I am aware, have not made it on to the register.

**CHAIR** - It is interesting because that is one of the ones identified as being something that people find washed up all the time.

**Mr WOODS** - I would have to take that on notice to go back to the registers.

**Mr BAKER** - I would also make a couple of points. The first one is that yes, industry identified this as an issue, as did the department, and a power of work has been done in order to, as described really well by Graham. The other thing is they are not the only occupants of the water and there is an element that we need to be a bit careful, that if a piece of debris is found it does not necessarily mean that it was one of the salmon companies.

I understand that they are a large player in this space but the rules need to be practicable and manageable. The department, MAST, and the companies are on a pathway of continual improvement here. Even looking at stats, the stats will make a lot more sense over the next few years now that we have everything well-marked. We will get a much better indication about how well they are doing or otherwise.

The other one I wanted to raise, I hope to talk about briefly, is the changes to the reporting protocols, because that came up last time.

**Mr WOODS** - Last time there was a debris app and a 1300 DEBRIS number which were run by industry. The way that was managed was essentially industry would communicate to the department and to MAST following any notification and would provide industry with an opportunity as it was their reporting mechanism, to respond and get out there and deal with any issues that were reported. Since then we have established a single point of contact, that being the MF Ops email address. We have worked through that with community groups. TAMP is aware of that and they have actively communicated to their members that it is a good mechanism for reporting or making any notifications on marine debris. Now we receive notifications direct to our email address. Any person making a notification receives an auto-response message acknowledging their report. In cases where it relates specifically to marine farming debris, marine farming equipment, then we follow up on that. That may involve contacting the company to retrieve the gear or, if it is subject to an official investigation, then we will respond to that, collect the gear and -

**CHAIR** - How will that be reported on or documented in the public domain so that people can see?

**Mr WOODS** - That is a good question in the sense of broadening the scope of the portal. At the moment we might have 'yes or no', or a compliance action, but now that we are getting those metrics we can now provide more clarity and detail on the nature of those reports and the number of instances of where compliance action has been taken.

**Mr VALENTINE** - Further on this, during one of our field trips we saw some of the material that has been collected off shorelines and the like, and it included things like drilling swarf. When holes are drilled in these plastic pipes, you get a spin off, a plastic spiral, those sorts of things going into the environment. Do you deal with the operators to minimise those sorts of events? I appreciate it is a huge thing.

**Mr WOODS** - We've been made aware of the swarf that comes off through drilling processes. We are working with the companies to try to recognise that that is an issue and get those issues addressed through standing operating procedures on the leases. Obviously, if you can sort those issues out on site, on the lease, we are not going to get these problems presenting outside the lease.

**CHAIR** - Can I then move onto the other aspect of a zero-tolerance approach, which, if it is genuine, is the penalties that apply. You can have zero tolerance with next to no penalty, and it is not particularly effective, necessarily, because it is just as cheap to keep on doing things the way you are doing them if the penalty is not high. We understand from Marine and Safety Tasmania that a small number of infringements were issued, and the infringements are relatively modest: four penalty units, $688. Is that correct?

**Mr WOODS** - That's correct.

**CHAIR** - Does the department regard that as an adequate infringement in a zero-tolerance approach to an industry of this size and value?

**Mr BAKER** - First, I would say that is a policy decision for government, and we implement the policy. The size of the industry, in some ways, is irrelevant, because the same penalties apply to any sea-based industry. If the government sees fit to change that, we would implement it. It is not for us to comment on whether it is too high or low.

**Ms FORREST** - Will it be reviewed in the review of other fees and charges?

**Mr BAKER** - It's a penalty so I would not want to commit 100 per cent. What I would say is the same thing as I have said all along, which is we constantly review all aspects of the finfish industry. I expect that at an appropriate point in time it would be reviewed, but a decision on whether it is too high or too low, and the policy setting, is for the government to make, not for us.

**CHAIR** - In terms of a penalty, it could potentially be distinguished as a penalty that applies to the finfish farming industry, as opposed to other marine users?

**Mr BAKER** - Sure it could but again that's a policy decision from government.

**CHAIR** - Indeed. I'm just clarifying that that would be possible to do.

**Ms WILSON** - I would only add, it is definitely a policy decision, but often when we look at fines, in principle, it is around consequence. Obviously, the consequence of a large piece of equipment coming off any boat can be just as significant as a large piece of equipment coming off a lease. Consequence is an important factor. I just say that as a principle.

**Mr BAKER** - It's also worth noting - I think Colin is about to tell me this - that the companies also do a lot of work in the areas where they farm fish, to clean debris, some of which, a lot of which, is not theirs.

**CHAIR** - We've heard about that from the companies, and seen it as well on visits.

**Mr SHEPHERD** - The point that we were going to make is not just a monetary penalty. There are also demerit points. It is a combination of the two.

**CHAIR** - Can you explain that a bit further? Demerit points which then ultimately -?

**Mr WOODS** - I guess in terms of the standard infringement notices that are issued following a breach or non-compliance. There are two sections in the Marine Farming Planning

Act that relate to that compliance action. One is section 91, which relates to a breach or a contravention of the management control in a marine farming development plan. The other is section 94, which relates to the location of equipment, so if equipment is found outside the lease area.

If it is deemed that there has been an offence committed under section 91, then not only is there a four penalty unit fine, but there is a four demerit point fine for that offence. So, demerit points, I guess, may accumulate for a licence holder, or a leaseholder, and, I guess, there are specific elements of the MFPA that relate to the capacity of a leaseholder to hold a lease when they reach a threshold number of demerit points.

**CHAIR** - So you could lose your licence, effectively, to operate that lease if you accumulated sufficient demerit points?

**Mr WOODS** - You could lose your capacity to hold any lease at all.

**CHAIR** - To date, how many demerit points across industry would have been gained, without necessarily pointing fingers?

**Mr WOODS** - I would have to take it on notice.

**CHAIR** - It would be interesting to know. From what we hear, notwithstanding the new arrangements that have recently come into play, infringements are incredibly rare. I am imagining gaining demerit points has been rare too?

**Mr WOODS** - I'd say the large majority of infringements notice that have been issued have been issued under section 94, which does not -

**CHAIR** - Doesn't gain you demerit points?

**Mr WOODS** - That is correct. Nonetheless, the provisions are there.

**Ms FORREST** - How many would you accumulate before losing your capacity to hold a lease?

**Mr WOODS** - Two hundred demerit points.

**CHAIR** - It would take a while.

**Mr VALENTINE** - With regard to the transgressions of this type, have we received a list of those over the last number of years? Have we already asked for that?

**CHAIR** - We have something from MAST but not from the department.

**Mr BAKER** - I can answer that, Mr Valentine. I have the numbers in front of me. I won't propose to read them.

**CHAIR** - Please don't.

**Mr BAKER** - I can provide them. Just take it on notice. It sits in the middle of the brief, also with the value of the fine.

**Mr VALENTINE** - What period of time are we talking about with what you have?

**Mr BAKER** - I have from 2014 to 2020.

**Mr VALENTINE** - Okay, so six years.

**Ms FORREST** - That includes the demerit points?

**Mr BAKER** - Can do.

**Mr VALENTINE** - And the amounts paid?

**Mr BAKER** - Yes, from 2014 to 2020 it will be number issued, fine amount, and also demerit points if appropriate. We can provide that for you and we are happy to do that.

**Mr VALENTINE** - I'm interested to know what planning takes place in relation to making sure there is sufficient water for each site.

**Mr BAKER** - Do you mean fresh water?

**Mr VALENTINE** - Yes, fresh water. When you are looking at new leases, what sort of planning takes place within the department to make sure that there is sufficient fresh water to be able to support that operation? Can you can talk us through that, or is it for the lessee to work out themselves?

**Mr BAKER** - Probably, Colin, or either/or.

**Mr WOODS** - I can talk to the marine farming planning elements. This is different in the sense that it relates to access rights to fresh water on the terrestrial realm. Through a marine farming planning process it is tabled, it is identified water will be used, but the specific engagement with elsewhere in the department, I can't comment on.

**Mr VALENTINE** - It is an element of approving a lease?

**Mr WOODS** - An operator would need to have the appropriate approvals to draw water or access water to facilitate its bathing operations. If it is a well boat, it may generate its own fresh water.

**Mr VALENTINE** - Does this include reverse osmosis plants that might be available on some of the vessels that they are operating? Does that get taken into account when approving a new lease?

**Mr BAKER** - To help Graham out because we are at the extent of his responsibilities, well boats are probably more a biosecurity question.

**Dr KLUMPP** - The use of them, but you're right, there is the ability on those well boats, as Graham said, to generate their own water. How that is done and what the implications of that and what the regulatory requirements are don't sit with us.

**Mr VALENTINE** - Who does regulate the well boats?

**Mr BAKER** - The director of the EPA regulates environmental impact of well boats but the accessing of water, which goes to your question, is regulated by the Water Management Act, which is in Deidre's areas of responsibility.

**Ms WILSON** - I would start by reinforcing Graham's observations that the proponent would need to provide the information that they have been able to access appropriate water allocations, so the Water Management Act 1999 would apply if it is on water. Applications for surface water licences can be made, they're under a surface water allocation decision framework. Any allocation will not have a significant adverse impact on other persons taking water from relevant water resources is something we'd consider.

That whole process in terms of that allocation sits in our water management area. I can't go to much more details than that. I can provide some information about our process if you wish, but what is important is that the proponents would have to identify the source. That would need to be under our Water Management Act if it was surface water. It would have to be appropriately licensed or -

**Mr VALENTINE** - Because we're all aware of the Glamorgan Spring Bay issue that occurred, obviously avoiding that sort of thing from happening is pretty important.

**Mr BAKER** - Sure. There's added complication given it was an historic lease. I think the question you were asking, Mr Valentine, was about a new lease so -

**Mr VALENTINE** - Yes. No, you're right.

**Mr BAKER** - any new lease, (a) the company or the proponent would have to demonstrate that they have access to fresh water, and (b) they would need a licence, the same as a farmer getting access to water, or anyone else getting access to fresh water under the Water Management Act which is administered by our department, but now in Agrigrowth and Water.

**Mr VALENTINE** - If reverse osmosis is being used to supplement the freshwater requirement for that particular lease, the release of water from those plants is something that the EPA would deal with?

**Mr BAKER** - I just double checked, yes, it would be. That's an environmental impact and that would be regulated by Mr Ford, the director of the EPA.

**CHAIR** - To follow up on that, given that the companies have to demonstrate that they can access the water that they are going to need and get suitable licences if they are required to do that, can the department say that it knows, it can paint a picture, of the amount of fresh water that's required by this industry? What proportion of that fresh water is being sourced through terrestrial sources, and what proportion is being generated through reverse osmosis?

**Mr SHEPHERD** - I don't think that we would have that information. What I would say is, and I'm sure you're aware, that the industry is taking steps to try to reduce the water consumption. That is one of the reasons why they've invested so much in the wellboats because that allows them to use less water to treat the fish through the bathing processes. As we've pointed out, I think any water that is required by the industry needs to go through a statutory process to obtain the necessary licences, and there's a variety of sources from where the industry can source that water. They can get it from streams or rivers, or they can get it from farm dams, or they can get it through osmosis.

**CHAIR** - It's interesting, though, that the department doesn't have a clear picture of the freshwater footprint of this industry and that breakdown of what proportion of that is sourced on land and what proportion is generated, say, through the boats, through the reverse osmosis.

**Ms FORREST** - Through hatcheries as well. Recycled, I know.

**CHAIR** - That kind of information is probably of interest. We hear that through submissions. There are questions around fresh water and being able to present that picture, particularly if it's a changing picture, where a transition is occurring from using sourced on-land fresh water to reverse osmosis.

**Mr BAKER** - They are all valid questions, Chair, to be honest. It's certainly a piece of work that we'd be happy to have a look at.

**Mr VALENTINE** - Could you provide for us some information in relation to the sorts of regulations that might exist around the use of wellboats, like not just the reverse osmosis but maybe noise generation and those sorts of things? Quite clearly, that is coming is through in our submissions as being an issue.

**Mr BAKER** - Yes, that's fairly and squarely in the director of the EPA's area, but I'm happy to take it on notice.

**Mr VALENTINE** - Yes, but the EPA can only work within legislation. I'd be interested to know what legislation there is that governs what the EPA can actually do?

**Mr BAKER** - I'm happy to take it on notice.

**CHAIR** - I may have missed this when you were speaking a moment ago about the industry having to demonstrate where it's going to source fresh water on land and get appropriate licences to do that. Does the industry pay for that fresh water from public water sources?

**Mr BAKER** - The answer is they will need a licence under the act and there are provisions for charges under the act.

**CHAIR** - Do we currently charge industry players for fresh water from land-based sources that are public?

**Ms WILSON** - I would see the industry as being like any other. They would access water if it's under the Water Management Act in accordance with any other industry.

As we said, we'll come back and give you some information on notice around the framework and we will provide some further detail. The Water Management Act applies equally to any applicant.

**CHAIR -** To clarify, the opportunity is potentially there for charges for public water to be made. I'm interested to know if we are currently doing that in any circumstances around this industry, notwithstanding that it would apply to any industry, but I am interested in this industry and the current arrangements that are there.

**Mr BAKER** - My answer is the opportunity is there and we'll come back on those and let you know.

**CHAIR** - To clarify, I'm interested in more than just the framework of how that occurs. I want to know specifically what's occurring.

**Mr BAKER** - Yes.

**Ms FORREST** - We might go to the management of seals. I know it's been a challenging time for seals generally. We've heard it from the companies about a range of seal management issues. I am sure you're aware of the ABC story that referred to a 2016 event, as I understand it. We'll go to that but, first, what I wanted to understand from you is the measures that are taken as seal deterrents - I believe companies undertake a range of activities - what's the department's role in that for animal welfare in the seal as opposed to the fish they want to eat?

I've been out on sites and seen them having a nice little bask in the sun on part of the infrastructure, and the work that the companies have done to make them more seal-proof, I suppose, is the term.

Can you talk about the role of the department in this issue and also the history? We might have touched on this previously, I'm not sure, but the history of the relocation and now no longer relocation.

**Mr BAKER** - This is Kris' area but I would say at the outset that there is seal management framework which was signed off by the department and the companies have signed off to that. That is the overarching document that sets the framework for how seals are managed.

Underneath that there are a set of quite detailed minimum requirements that sit under that. Our job, through Kris' team - and I will get Kris to talk in a moment - is really around wildlife management, managing the animals, and ensuring that the companies are compliant with the overarching seal management framework.

That is our role in that. Kris?

**Dr CARLYON -** Under the seal management framework and the minimum requirements that sit underneath that companies have, it provides for access to seal deterrents to manage adverse interactions. When we're talking about interactions, we're talking about risk to farm workers and damage to stock and infrastructure. The framework provides options. We issue permits to the companies, to individual employees, to use those deterrents following

application, and we also provide training in the use of those deterrents. That covers animal welfare aspects, it covers how they use those deterrents in an appropriate manner.

**Ms FORREST** - What are the deterrents that are approved for use?

**Mr BAKER** - Has a copy of the seal management framework been tabled before?

**Ms FORREST** - I don't believe so.

**Mr BAKER** - I am happy to table it.

**Ms FORREST** - Thank you.

**Dr CARLYON** - Currently there are a range of deterrents. One is what we call 'seal crackers'. It is a small explosive device that is thrown into the water and emits a loud sound and is designed to scare the animals away from that activity.

**Ms FORREST** - What's the debris left behind from that?

**Dr CARLYON** - They're biodegradable. They're made from a cardboard paper and sand, essentially, so they are biodegradable. There are two other deterrents - seal 'scare caps' and beanbag devices. The scare caps are like a 'bear scarer', fired from a rifle. It's a small dart and when it hits the animal a small charge goes off so it's another scare tactic - a loud noise, essentially.

**Ms FORREST** - And the little dart that hits the seal, that ends up in the marine environment?

**Dr CARLYON** - It does, yes.

**Ms FORREST** - And that's not biodegradable?

**Dr CARLYON** - As far as I'm aware no. It is something that we're looking into. Beanbags are the other one. So, basically the same as what is used on other wildlife around the world but also by police in riot situations, for example. Once again it's designed to scare that animal in the moment and deter it from interacting in that activity.

**Ms FORREST** - What are the beans made of?

**Dr CARLYON** - They are small bags of lead shot.

**Ms FORREST** - And lead stays in the environment?

**Dr CARLYON** - Yes. They're the three that are available. The companies will trial new options on occasion, so the companies are definitely looking at trialling new options that might be improved, less cost for example and humane for the animals.

**Ms FORREST** - High pressure water and things like that?

**Dr CARLYON** - That's one that is being trialled at the moment and it looks like it's going to have some positive results. We're really hoping that the trials will come up trumps there and we'll have another option to go with.

**Ms FORREST** - Clearly, getting a seal in the eye with a high-pressure jet could be quite harmful? This is not an approved use as yet, as I understand from what you said? How is that being managed to ensure animal welfare for the seals?

**Dr CARLYON** - It's a good point. So that's one of the aspects we considered when we were assessing the applications to undertake the trial. That trial proposal went through DPIPWE's Animal Ethics Committee and received approval from that committee to go ahead, and that risk was identified and a range of mitigation measures put in place to avoid that happening. There were conditions on the strength of the water stream. A vet had to be present and observing. Video was taken during the trial, for example. A whole bunch of checks in place to try to make sure that didn't happen. One of the points of the trial is to demonstrate that this is safe and effective for use.

Any new deterrent goes through that same process, and ideally with animal ethics approval in place as an additional check.

**Mr BAKER** - What about tracking and reporting, Kris? Can you talk about that?

**Dr CARLYON** - For deterrence?

**Mr BAKER** - Yes.

**Dr CARLYON** - Yes. As far as deterrent usage goes, companies under the seal management framework are required to provide monthly returns on deterrent usage. After every usage event - it's not necessarily every deployment of a device, but if they were deterring seals, for example, during a bathing operation they might deploy five crackers - that would go as a line item on their return sheet and we receive them every month from each company.

**Mr VALENTINE** - It surprises me that lead shot would be used. How would that ever be considered to be environmentally-friendly? It seems an odd thing to include in a trial?

**Mr BAKER** - I would say to be clear it's not a trial. It's been a management technique for quite some time - probably 10 years or more. It's one of the options available. I guess the point is that Kris hasn't mentioned that there is an escalation process, isn't there, Kris, in how on-farm the companies under the framework are required to use the deterrent. Do you want to talk about that briefly?

**Dr CARLYON** - Yes. I guess when we are talking to the farms - and they are very across this as well for good reason - is that deterrents are the next step above exclusion. When we are talking about managing seal interactions, or managing wildlife interactions in general, those exclusion measures, so the pen design essentially, is the number-one best option.

So, you get your exclusion measures right, your deterrent usage is going to go down. You're always going to need access to some sort of deterrents, these are really smart animals.

You put in place an exclusion measure that excludes it here, it's going to target and try out something else.

**Ms FORREST** - They go to the next company and see if they've implemented it.

**Dr CARLYON** - You're absolutely right. When one company gets ahead of the game perhaps another company sees more seal pressure. It's definitely something we've seen.

**CHAIR** - To follow up on the monthly reporting that you talked about that comes through. Is that then on the data portal? Is that shared publicly through the data portal?

**Mr WOODS** - No.

**Mr BAKER** - It is on the company's website.

**CHAIR** - It is something that people would be interested to see on the data portal.

**Ms FORREST** - Just continuing on with the relocation. I'm not going to rely on a media article for all my facts, obviously, it seems that Tassal was provided with a permit to hold seals for a period. I understand there is a process around that. From the media report, it would suggest that they were held in a way that probably wasn't within the permit provisions, certainly for the length of time, and the way the animals were treated.

Can you give me an update on what the relocation of seals framework or practice is? What is allowable, how it is done if it is done, what was the situation with that particular incident?

**Mr BAKER** - Why don't we split that into two, if that is okay. Let's deal with the general policy on relocation, then I am happy to talk about the specifics.

**Dr CARLYON** - Currently that's an easy question to answer. Relocation is no longer provided for under the framework. Relocation was phased out in 2017. Companies are no longer trapping and relocating seals.

**Ms FORREST** - When this particular story was about, it was still a process that was proved then. Relocation in 2016?

**Dr CARLYON** - Relocation was, yes, at that time. Phased out in 2017. The framework allows relocation on a very specific basis if approved by DPIPWE. It provides a little window there for relocation if there is a certain animal, or a certain situation, where relocation might be an appropriate management tool.

**Ms FORREST** - Such as?

**Dr CARLYON** - Let's say we have a particular animal with a particular problem and we want to try to break that behaviour.

**Mr BAKER** - 'Time out for the seal' is how it was described to me.

**Ms FORREST** - I wonder how they go with that? The naughty corner.

**Dr CARLYON** - That's not a bad description. Often with deterrent use, for example, and other management, we are trying to break a pattern of behaviour. Having said that, since relocation ceased in 2017, we have implemented that provision twice. It has been quite a local movement.

**Ms FORREST** - One seal being relocated into the naughty corner for a period.

**Dr CARLYON** - Two individual seals since 2017.

**Ms FORREST** - In separate naughty corners.

**Dr CARLYON** - Yes.

**Ms FORREST** - That's what I do with my children.

**Mr BAKER** - Yes, I am aware of the media reporting. Yes, I am aware, and it is true to say, that the department conducted an investigation into the fact that Tassal was holding seals in a pen, something for which they are on the public record of admitting that they did do. I also say that they have been very strong about the fact that it was done as a safety precaution for their workers and the seals before they were relocated, because at that point we were relocating.

I also make the point that they are very clear that there were no seals harmed or no seals died as a result of the activity, or as a result of relocation. We conducted an investigation. I am very confident that the investigation was consistent with our compliance and enforcement policy. The matter was then referred to the DPP.

We also issued a special permit. It is really important to understand that one part of this is about whether the company had a permit or not. The other is whether they are entitled to a permit.

It is important to understand, as Lloyd, who is not there, Lloyd will say animal welfare investigations can take up to two years, and we still have to be able to regulate and manage the industry as investigations are ongoing.

The permit that was provided, though, I make the point, had additional controls in it over and above what Tassal was first doing.

**Ms FORREST** - In terms of care of the animals?

**Mr BAKER** - Yes.

**Ms FORREST** - Was that because there was concern that they weren't caring for the animals? There were claims of not being fed for some period of time.

**Mr BAKER** - I am not going to, like you, rely on media reports. What I would say is that the permit that was issued, when we did our detailed review, independent of the investigation, we determined that there should be additional controls put in place, and they

were. We conducted a full investigation in a proper manner consistent with our policies and procedures and it was referred to the DPP.

**Ms FORREST** - Is there any capacity now or in the future to issue permits for seals to be held in such an arrangement?

**Mr BAKER** - The answer to that is yes. I can issue special permits under the act. That is fine. I make the point that trapping seals is part of the overall seal management framework. That happens now. It does work as exclusion in a similar manner, probably not quite as dramatic as relocation, but it is used as a time out. The other point I make is this was designed to hold seals prior to relocation, which something we do not do en masse, but we did back in 2016.

We can issue research permits for a range of things, but we always keep in mind animal welfare and we use our expert advice through the animal welfare committee inside the department.

**CHAIR** - We are going to have another five-minute break and we will resume at 12.10 p.m. I wanted to move on to something we touched on last time and came up in a few submissions and I am interested to understand it better, and that is the 10-year reviews that occur of the arrangements for licencing and leases, I believe. I want to have a better picture of what is involved in that 10-year review process? Who is responsible for doing it? What possible outcomes are available from that review? Who is involved or consulted in the review process?

**Mr WOODS** - Yes, there are provisions under the Marine Farming Planning Act to conduct a review. The review relates to a current marine farming development plan area. Under the act, the review can take place either at the direction or the request of the minister or within 10 years of the making of the plan.

**CHAIR** - It must occur within 10 years?

**Mr WOODS** - Correct. At the moment we do have plan areas that are subject to review. A review has been initiated. The intent of the review is to ensure that the objectives of resource management can continue to be achieved. If there have been any change in circumstances within a plan area and then through that review process, if it is deemed appropriate that there needs to be a change or a modification to the plan, then that would enter into a standard planning framework whereby it would be referred to the panel. The panel would determine whether any modifications are substantial or not, or if they are substantial, it would then revert into a standard amendment process.

**CHAIR** - To clarify the decision points there, the initial decision about whether any modifications are required is taken by who?

**Mr WOODS** - The planning authority reviews the plan.

**CHAIR** - So effectively the department and the secretary of the department?

**Mr WOODS** - Yes.

**CHAIR** - And decides whether, first of all, any changes are required, any modifications are required?

**Mr WOODS** - Yes.

**CHAIR** - And there is not an external consultative process involved in that? That is an internal departmental process?

**Mr WOODS** - Yes.

**CHAIR** - If it is determined that modifications are required?

**Mr WOODS** - If we could just backtrack there. I may need to take some elements of this on notice. The expectation is that through a review process, yes, there is consultation. Specifically, there will be consultation within the department across all elements, relevant areas of the department, for instance, Wildlife Management, EPA, Biosecurity Tasmania. The critical thing is to ensure that the management controls and mitigation measures that are in place within a plan are appropriate if there have been any changing circumstances in that plan area. Those are the management levers. Are they appropriate? If not, then it is a question of identifying whether they should be modified and whether that should result in a referral to the panel.

**CHAIR** - Changing circumstances could be changing environmental circumstances or external circumstances not just things that are happening on the lease, itself?

**Mr WOODS** - Yes.

**CHAIR** - Is that initial review that is undertaken by the department as a planning authority, is that documented and does it become available publicly?

**Mr WOODS** - I'd have to take that on notice.

**CHAIR** - The next step is, if it's determined that modifications are required then it goes to the panel?

**Mr WOODS** - Yes.

**CHAIR** - Who is going to examine it in order to make a recommendation because they're not a decision-making body? Correct?

**Mr BAKER** - Correct.

**CHAIR** - Then that process that is undertaken by the panel, they then follow the process outlined in the act which involves, potentially, public hearings and those sorts of external processes?

**Mr BAKER** - Correct, that is the standard modification process. So we're clear, I have cheated and I have the act in front of me, it is actually the minister who makes the determination. If the minister is of the opinion that the Marine Farming Plan requires

modification then they direct us, the department, to take it to the panel through the amendment process.

**CHAIR** - To clarify that, does the minister make that determination based on the review that has been done by the department?

**Mr BAKER** - Correct.

**CHAIR** - That is still the first point, the internal review that is done. Then it's the minister's decision as to whether that then goes forward?

**Mr BAKER** - Yes. For clarity, it is both. If the planning authority considers that a marine farming development plan should be modified, they can notify the minister so that happens. If the minister is of the opinion that the Marine Farming Development Plan requires modification then he directs us to take it through the planning - the amendment process. That is right, isn't it?

**Mr WOODS** - Yes.

**Mr BAKER** - There is a ministerial decision. I wanted to be really clear about that.

**CHAIR** - We might even get that in writing from you or something.

**Mr SHEPHERD** - I was going to say we might take that on notice.

**CHAIR** - You provided a wonderful diagram previously, those are useful.

**Mr SHEPHERD** - It might be a modification process as opposed to an amendment process.

**CHAIR** - And there's a differentiation between the two?

**Mr SHEPHERD** - There is a differentiation.

**CHAIR** - That would be very good to have then, nice and clearly.

**Mr BAKER** - We'll do a flow chart for that.

**CHAIR** - Thank you.

**Mr VALENTINE** - Could you include in that any public notification of changes that might be made? I believe that there may not be public notifications made on amendments to leases and the like.

**Mr SHEPHERD** - I beg your pardon? No public - ?

**Mr VALENTINE** - There may not be public notifications made when a lease is varied or changed in any way, shape or form.

**Ms FORREST** - Public input into the ongoing assessment?

**Mr VALENTINE** - Yes, any changes made as a result of the 10-year review.

**Mr WOODS** - To clarify, are we talking about a lease area that's been allocated under the Marine Farming Planning Act, or are we talking about a marine farming development plan?

They are two separate things. The lease can be allocated under the act and it can be varied; it can be granted and that's a separate process to a planning process. Should there be a variation to a lease within a zone, for instance, if it's relocated within the zone or if it's expanded, then that process within the zone involves consultation with adjacent leaseholders to ensure that there's no adverse effects on water quality, for instance.

If you're talking about a planning process, then it's an open, transparent, consultative process that involves a consultation step. If it involves an EIS it needs to go out for public consultation.

**Mr VALENTINE** - That can't be appealed, can it, if indeed an approval was given? After that consultation process, there's no appeal mechanism that members of the public can use?

**Mr WOODS** - Not by members of the public.

**Mr BAKER** - Other than all decisions are subject to administrative appeal, as you know.

**Mr VALENTINE** - Yes, administrative appeal, which is a point of law.

**Mr BAKER** - Correct, or process.

**Mr WOODS** - In addition to that, if there's a lease specific process, adjacent leaseholders do have an opportunity to appeal that decision through RMPAT as well.

**Mr VALENTINE** - So the leaseholder gets the opportunity to appeal it?

**Mr WOODS** - Yes.

**Mr VALENTINE** - Members of the public don't.

**Mr WOODS** - This for movement within a zone that's been established through a planning process.

**Mr BAKER** - Because leaseholders are the ones who would be affected because it's inside the zone.

**Mr SHEPHERD** - Mr Valentine, the point that might have been raised, that you were going to - and Graham has mentioned it - is there is a decision point in there about whether a change is a substantial change or not. If the decision is that it is not a substantial change because it is to fix an error or an administrative change, then those decisions can be approved without following the normal process, which would bring in the public consultation. That is maybe where some of the submissions have got.

**CHAIR** - To clarify, that decision sits with?

**Mr SHEPHERD** - That decision would sit with the minister.

**CHAIR** - You mentioned you have some sites coming up for review presently. Would it be the case that in that initial review that is being done by the department as the planning authority, that you would consult with, say external research bodies and people like that who are involved in that area currently through maybe research projects or data collection projects?

**Mr WOODS** - Yes.

**CHAIR** - So it is internally department consultation and potentially external consultation if there is active research going on?

**Mr WOODS** - Yes, potentially.

**Ms FORREST** - The review of the Sustainable Industry Growth Plan, the last one which was released at the end of last year from memory?

**Mr SHEPHERD** - The year before.

**Ms FORREST** - The year before - time does fly.

**Mr SHEPHERD** - It does.

**Ms FORREST** - So we must be overdue then for another one?

**Mr SHEPHERD** - No, sorry.

**CHAIR** - One year and then every two years.

**Mr SHEPHERD** - That is correct. It is due in December of this year.

**Ms FORREST** - And that is on track to be released?

**Mr SHEPHERD** - That is on track.

**Mr BAKER** - This is a good point to spend a couple of moments discussing what will be involved in that review and what the outcome will be, if the Committee is happy with that?

**CHAIR** - I am mindful of time and that we want to get through some things so if that is something that we can be provided with?

**Ms FORREST** - If you could give us a brief update of where we are headed with it because this is what is focusing our attention as a committee because it is the expansion plans that are raising the concerns of members of our communities, really.

**Mr SHEPHERD** - Sure. I will be as brief as I can. As has been pointed out, there is a commitment in the salmon growth plan that it will be reviewed at year 1 and then every two-year interval thereafter. There are a number of action items in there - 17, and, similar to the first-year review, the intention would be to provide a progress report against those 17 actions

so that people can see how the industry performance is tracking and how the commitments that have been made are being delivered.

One of the things that Tim spoke to in his opening statement was that one of those action items which talks about the proposed map of grow and 'no grow' zones, the Government has recently announced they will be asking us to run a process of doing a spatial planning exercise to review that map to see what future opportunities might be available for industry growth.

**Ms FORREST** - We found it difficult to understand how that map was first implemented or put in place in terms of who was consulted. Who will you consult when you are undertaking that work?

**Mr SHEPHERD** - The commitment that's been made is we are looking to use some work done by IMAS.

**CHAIR** - The trial that was done?

**Mr SHEPHERD** - Yes. The Spatial Marine Planning and Assessment tool work from the south east and rolling that out statewide. We have the corporate knowledge in IMAS. There is an intention to form an advisory group, similar to what happened with the previous work and that would be made up of similar members with probably some additions. At the end of the day, there is a commitment that any changes will go out for full public consultation. Any proposed changes that come about as a result of this work would go out for public consultation.

**Ms FORREST** - Across this plan?

**Mr SHEPHERD** - There is no commitment that the spatial planning exercise will result in any change to the current map but this is a new approach to look at it using a science-based assessment.

**CHAIR** - So if we come back and ask you again why this area and not that area, you will be able to tell us the answer this time?

**Mr SHEPHERD** - We will be using a science-based approach to look at a range of values and to determine where the proposed zones may or may not be allocated and that will go out for public comment if there are any changes so people have a chance to -

**Ms FORREST** - Potentially we could see areas removed? Most of them were already under exploration or operational.

**Mr SHEPHERD** - I can't pre-empt what the actual outcomes of the work will be.

**Ms FORREST** - That could happen though?

**Mr BAKER** - Potentially you could see zones change in the map, Ms Forrest. That's the point.

**Ms FORREST** - Yes.

**Mr BAKER** - Full stop. All zones change, but -

**Ms FORREST** - But it will be evidence-based changes that are made?

**Mr BAKER** - Following public consultation.

**Mr VALENTINE** - A different area, environmental licences. We've had submissions saying that unlike all other level 2 activities regulated by the EPA under the EMPC Act, there's no guarantee that a finfish farming activity will be subject to a transparent public assessment process conducted by the EPA board. The question that arises is that the public isn't able to make a formal representation in relation to an application for an environmental licence assessed by the EPA director instead of the EPA board, apparently, and there are no third-party appeal rights related to any environmental licence granted to a finfish farm by the EPA director.

**Mr BAKER** - I think you've answered your question in the way you asked it, Mr Valentine. It's a matter for the EPA and I'm not going to comment on a decision or a process run by the EPA.

**Mr VALENTINE** - It's the framework I'm interested in. I appreciate the EPA makes the decisions, and the director makes the decisions, but the framework within which they operate should be of interest to the department.

**Mr BAKER** - It is, but again you're talking about the way that the act works. Ultimately that's a decision for government as to whether or not they're going to change the act. What I can do is take the question on notice and have Wes and I provide you with a full response.

**Mr VALENTINE** - Thank you, I'd appreciate that. I'm not 100 per cent au fait with what the act does or doesn't provide for. I'd be very interested to know whether there is a differentiation between what the director can approve and what the board can approve, and what is subject to third party appeal rights.

**Mr BAKER** - I'm happy to provide you with a written response from Mr Ford and myself.

**Mr VALENTINE** - There's no public notification of the allocation grant renewal or variation of leases apparently?

**Mr SHEPHERD** - I would have to take that on notice, to be honest.

**Mr VALENTINE** - Is there an issue with doing that? Why shouldn't these sorts of things be publicly notified?

**Mr BAKER** - We'll take the specific question on notice. I make the general point that we're always happy to disclose. If there is no commercial reason why we can't disclose I'm sure the department would be happy to disclose, but I'll take it on notice. Unless you want to say something else?

**Mr WOODS** - I could just add to that. Through a planning process zones are identified that provide for the development of marine farming lease areas. I guess it's explicit through the planning process that the planning intent is that marine farming operations on marine farming leases will subsequently occur within those zones. That's communicated through the process. For instance, with Storm Bay, all the proposed lease areas, the proposed cage

locations, the areas of those leases, approximately, were communicated through the planning process.

**Mr VALENTINE** - Thank you. Are there any established criteria for a decision by EPA board, or EPA director to grant an environmental licence, or are they entirely discretionary? I know, again you're going to tell me that's for the EPA board, but in terms of the framework in which they operate are there any established criteria?

**Mr BAKER** - You are going to get the same answer, which is you're asking me about the operations of the director and the EPA board. Once again, I'm happy to take it on notice and come back to you.

**Mr VALENTINE** - Please do. I'd like to get a response to that, thank you.

**CHAIR** - I'm just going to go back to the review on the growth plan. I want to check in with you on the actions. You're sticking with the 17 actions, yes? So far, in the first iteration in the one-year review there's no time lines or milestones included. We talked about this briefly last time. It's probably relevant to clarify it again with you this time, now that we're actively looking at this next review. Even in the table presented in the one-year review it has 'action', it has 'progress' and then it has a column that is titled 'status'. There's nothing in that column for any of the actions.

**Ms FORREST** - It's a different colour.

**CHAIR** - Oh, there you go. I printed it out in black and white. I presume it is like a traffic light colour coding system. That is a fairly broad, not particularly informative way to indicate what is going on. Is the intention that there will be greater detail provided? Just very clear points. Not just a broad comment about progress, but milestones, or a time line indicated, or something like that, so that we get more detail, and more understanding of these actions, where they sit and where we are looking for them to go.

**Mr BAKER** - I am reminded of our conversation six months ago about this. I think, without wanting to go back to *Hansard*, my answer was, and it remains the same, that this is the government's strategy, and the government's position was that it made more sense, rather than to put dates, to do regular updates. That is their approach. That is the approach that we have been asked to follow.

I take a little bit of issue with the claim we haven't provided significant detail on each of the actions. In my reading, I think, there is quite a bit of detail. I also make the observation that this year is a good example of how while there are a lot of the things in here we are working very hard on, there are always going to be factors that affect our ability to execute. Instead of having dates, the approach was to have regular review.

**CHAIR** - To clarify, I didn't suggest that there wasn't detail there. I was pointing to the fact that we can't track progress through either a time line indication, which of course can then be varied according to external circumstances, or, perhaps, to not tie into a time line, more of a milestone approach, so you could say well this is what progress of this action will look like: step 1; step 2; step 3. In that way, we are not tied to a time line, but we understand where we are on achieving the action.

**Mr BAKER** - All of which are very good points. All of which are things that we can consider. I don't know if you wanted to add anything.

**Mr WOODS** - No.

**Mr VALENTINE** - We're told that no marine farm development plans impose restrictions on total permissible dissolved nitrogen output or total biomass. This is despite the fact that environmental impact statements for the Marine Farming Development Plans assess or model impacts based on identified maximum nutrient and biomass. It seems a little odd to me, that there aren't any restrictions in the Marine Farming Development Plans.

**Mr SHEPHERD** - I am happy to tic-tac with my learned colleague, but I think the reason why it has been delivered in the way that it is, if we put it into a management control, where we set a biomass limit or a TPD limit, and then we wanted to change that, we would have to go through the planning process to make those changes. That would bring in the provisions of the act.

If it is within an environmental licence, then it gives greater discretion to the director of the EPA to set those limits. That means, using Macquarie Harbour as an example, where we've needed to change those limits, we are able to do that fairly quickly. If it was in the management controls, it would take a longer process to do that.

**Mr VALENTINE** - This comes back to how much baseline data is available, for instance, when putting these development plans together. Is it pointing up that there is not enough data to be able to establish what the capacity of that side is, in terms of biomass?

**Mr BAKER** - What it is pointing to is that at the point at which the plan is submitted, we do an EIS, which is the best available science at the time. We want as much flexibility as possible so we can apply adaptive management principles. I think Colin has explained that extremely well. If it is in the plan then it is much harder for us to apply those adaptive management principles. Macquarie Harbour is an excellent example of how we have applied adaptive management to bring down the stock levels as a result of new information and scientific information coming to us.

**Mr VALENTINE** - Some might say that that happened because of the sorts of events we have experienced out there, and that, in fact, it didn't really work out that well. The adaptive management process.

**Mr BAKER** - I guess, Mr Valentine, it depends how you look at it. I look at Macquarie Harbour and think it is an excellent example of adaptive management. It is an example, as we became aware of the science over a period of time, we have brought down the total stock levels and added additional controls on the licence because we had the ability to do it. If we had taken the approach with the feedback you have received it would have been much more difficult for us to be able to manage that body of water in an adaptive and contemporary way.

**Mr VALENTINE** - Thank you.

**CHAIR** - I going to come back to pick up on something we talked about last time as well. I am not sure if we followed up on it with you. It relates to action 13, which is around the new economic research to quantify the impact of the industry on the state's economy. I

know you pointed out when we spoke last time that it is a different department that does that - State Growth - but we did talk about being provided with access to that if that was being undertaken. Are we clear on whether that has been undertaken, that economic assessment?

**Mr BAKER** - My understanding is since the time that we have had that conversation you have been provided with this document, which is the document that was done in November 2019 which provides significant information about the economic benefits.

**CHAIR** - That's the most recent one then?

**Mr BAKER** - Yes. Keeping in mind it has finfish in there but it is also about fisheries and aquaculture together, but that is the most recent economic contribution that was done. For what it is worth, it is a very informative and easy to read -

**CHAIR** - We can't extract salmon industry?

**Mr BAKER** - Finfish is spread out in more detail in the report.

**CHAIR** - Excellent. We will go back and look at that.

**Ms FORREST** - One of the issues that raises concern in the public, particularly, is the issue of the risk of, and actual occurrence of, mass mortalities of fish in any setting. Are you happy with the plans of each company to deal with a mass mortality?

**Mr BAKER** - I think that's a good question for the director of Biosecurity, Dr Klumpp.

**Dr KLUMPP** - First of all, this is a responsibility of the EPA to manage that. However, we are engaged in that process as well. Mass mortality events - and we have experienced them in other species and we have experienced them in salmon - they are all quite separate and unique. They all have different conditions. They all occur in different places, in different environments. So it is an example of having broad plans in place ready to go but being very flexible in how you then manage that. The EPA has broad plans in place for those events. If the balloon goes up then we all come together, the Chief Veterinary Officer, the Director of the EPA, those bodies that are responsible for it, with industry representation, to map out immediate actions and what needs to happen. We are prepared for them but we are also aware that they vary a lot and you have to be flexible. You can't put rigid structures in place and say that is what is going to happen.

**Ms FORREST** - I accept the need for a flexible approach around this and the need for a plan and a strategy to kick into gear as it can happen quite quickly, obviously. What plans do the companies have to deal with, say they lose one third of the fish on their lease, die, what do they do with them? What is the plan?

**Dr KLUMPP** - Again, that depends on the particular circumstance. I can tell you what we are planning in the future for this under the new Biosecurity Act. Under the Biosecurity Act and the program that we are developing there will need to be biosecurity plans for those zones, and they will include, specifically for those areas, what those requirements are. We are investigating ways of treating these things to make them environmentally sound, so composting them.

**Ms FORREST** - Dead fish?

**Dr KLUMPP** - Yes, dead fish. Composting and silage. Those sorts of processes. We don't have the facilities to do those at the moment.

**Ms FORREST** - If we get a mass mortality in Macquarie Harbour today, what would we do with the fish?

**Dr KLUMPP** - Bury them most likely.

**Ms FORREST** - Where would you bury them?

**Dr KLUMPP** - Wherever the EPA said it was appropriate.

**Mr VALENTINE** - Not down a mineshaft, unless the EPA said it was appropriate.

**Ms FORREST** - The new Biosecurity Act requires them to have -

**Dr KLUMPP** - Will require them to have -

**Ms FORREST** - What is the time frame for that?

**Dr KLUMPP** - We are in the process, and Tim said he wasn't going to mention COVID-19 before but I am going to because, as you could understand -

**Ms FORREST** - You haven't been busy at all, Lloyd.

**Dr KLUMPP** - We haven't been busy. We've been engaged at every level in that response and that has held up the work that they are doing around the salmon biosecurity program. However, we are at the point where we have a final draft ready to go to the next stage of consultation.

**Ms FORREST** - What does that consultation look like?

**Dr KLUMPP** - There's two phases to it. The first is consultation with a range of stakeholders. These are the people - we call them the secondary stakeholders. They are those people otherwise engaged in the industry other than growers. So, transporters and smaller farms, other ancillary industries. But also others who may be impacted by the industry or the regulations like the other seafood industries, the other sectors. There's that next layer out. We're going to that consultation now, the secondary stakeholder group and we've got a long list of those.

Once we've done that and got that feedback we may well adapt what we've got in the program again and then we go to public consultation. So, that's going to be the length of the things that take the most time now. We've got the program developed. We've got the standards essentially developed to our satisfaction. There'll be feedback obviously through those consultation processes it will take account of and we finalise our program. We wouldn't expect to be able to get to that public consultation until early 2021. Then there's the regulatory process to go through.

**Ms FORREST** - In the meantime, the only mass mortality is buried somewhere -

**Dr KLUMPP** - We've used current frameworks. We've got the Animal Health Act. We've got the EMPCA. We use the current framework.

**CHAIR** - Can I pull up on that and round the public consultation that's likely to occur early in 2021. Is that going to be an 'open for submissions' consultation process as opposed to workshops or anything more intensive like that?

**Dr KLUMPP** - We actually haven't sat down and planned that yet. Certainly, we'll use whatever techniques we can to get the widest input that we can - as we did with the act.

**CHAIR** - I think you can certainly define a very interested group of community stakeholders as well as a broad open opportunity.

**Dr KLUMPP** - Where we started with this whole process back in 2018 was through the global salmon symposium. That model was used of having focused working groups essentially of all stakeholders in those focused working groups. It was a really solid model and a lot of the stuff that we learned that went into the development of these standards for the salmon industry came from that process. So it's a very attractive process for us to do that, but it also has to be a broader consultation. It can't just be that targeted consultation. We'll go to a broader consultation -

**CHAIR** - My concern would be more that it would be only the broader and not the targeted. It would be great to -

**Dr KLUMPP** - No. The first phase is very targeted to specific -

**CHAIR** - Yes, I've heard that, but I'm talking about the broader community. There's the interested stakeholder groups in that - not ancillary services or ancillary industry, but community groups that would be good to consult with more actively.

**Dr KLUMPP** - We would certainly consider that.

**Mr VALENTINE** - Has there been any discussion around costs associated with these sorts of events and disposal of material, etc, and as to who bears that cost?

**Dr KLUMPP** - It's fair to say that in the process of developing these standards that issue was raised a number of times in order to ensure that we had practical standards that could be implemented. I will say that from our point of view the standards need to be appropriate to manage the biosecurity risk, and they need to be enforceable so that we can ensure that the biosecurity risk is managed. We're not going to compromise on that because somebody else has to pay.

**Ms FORREST** - Do you expect to have the whole process completed by the end of next year?

**Dr KLUMPP** - Yes, indeed.

**Ms FORREST** - Barring other catastrophes.

**Dr KLUMPP** - I'd be disappointed if we didn't have it completed by the middle of the year. But we've already seen that there are events that can get in your way.

**Mr VALENTINE** - There doesn't appear to be any published guidance on what needs to be included in an environmental impact statement, and no requirement for applicants to demonstrate rather than simply state there will be no significant impacts on natural and cultural values or demonstrate competencies to meet the stated objectives and have the impacts independently verified. Can you comment on that? Is this something that's recognised and is being dealt with?

**Mr BAKER** - Yes, in short. The salmon plan itself talks about the need to have a set of standard requirements, or almost a template for the EIS. We think that's a good idea. It's on our list of improvements and we will be keen to get it out there as soon as possible.

What I would say though however, is obviously the EIS itself goes through the formal planning process where it is validated and it is intuitive process. It bounces around to make sure that it is appropriate and the department itself sets guidelines for the proponent to ensure that the right information is captured within the EIS.

Having said all of that, the comment you made is accurate and it's on our list of things to do.

**Mr VALENTINE** - Thank you.

**CHAIR** - We are bang on time. Thank you very much each of you for coming. We really appreciate you answering the questions and being prepared to share your expertise and understandings with us.

**Mr BAKER** - Thank you very much for inviting us again, and once again thank you to my team who have done an excellent job in skilling me up, and others up, in all things finfish. Thanks very much.

**CHAIR** - I there's some matters we'll follow-up with you from today and that would be appreciated.

**THE WITNESSES WITHDREW.**