

**THE LEGISLATIVE COUNCIL SELECT COMMITTEE ON THE MANAGEMENT OF THE TAMAR ESTUARY AND ESK RIVERS MET AT HENTY HOUSE, LAUNCESTON, ON TUESDAY 3 MARCH 2009.**

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**Mr LES DICK** WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

**CHAIR** (Mr Finch) - Les, thanks very much. I think I have expressed to you before that we appreciate the fact that you have taken the time to come and give evidence and it was resonating quite clearly amongst the committee members that we were really keen to hear your evidence and to have it presented as part of this investigation about our terms of reference, whether a single statutory authority is needed to manage the river and the catchment areas in the South Esk and the North Esk rivers.

Les, the process is quite informal. What we would like you to do is perhaps give us a bit of your background and your involvement with the river, anything you would like to say about your experience with the river and your observations and then we will ask you some questions and then see how we go.

**Mr DICK** - As far as the river goes I have been on the river since I was a young fellow. I have been the owner of many boats, and the owner and operator of the dry dock in Launceston, the operator of the syncrolift in Launceston, marine ship repair facilities. I was the Chairman of the Tamar River Improvement Project Committee - TRIPC - for some four to five years whilst I was a warden.

**CHAIR** - When was that established Les? In the 1970s, 1980s?

**Mr DICK** - It would be the late 1980s. That was established when we had the Port of Launceston Authority and I was a warden. Because my knowledge was a little bit better than most wardens of the actual river that we were dealing with I was elected to be the Port of Launceston Authority's representative as far as river matters were concerned and particularly the dredging and the planning for what should happen in Launceston. I was consequently made the chairman of that and remained in that position until I retired as a warden.

**CHAIR** - A different world then, Les, really because a lot of heavy shipping would come into the city itself.

**Mr DICK** - No, there was no heavy shipping in the city. There was only ship repair work. There was no commercial trade.

**CHAIR** - When did that conclude?

**Mr DICK** - That has not happened for well over 25 years. The last commercial activity on the river, and we will strike out tourist craft because they hardly rate as far as commercial vessels go, was Flinders Strait Shipping Company which operated from Kings Wharf. One of the things that you can say about that operation is that actually whilst the Flinders Strait Shipping Company operated from Kings Wharf it maintained

the depth of water there and it is only since there has been no activity from ships that that particular area has suffered badly to the state it is in now. When there was a commercial activity there it did not happen because the ships kept it rather clean and kept the silt moving.

**CHAIR** - With the propellers?

**Mr DICK** - Propellers moving and docking and undocking and simply in the water going up and down. If you have a look at the vessels that are there now most of them have a great big pool around them because simply the lifting up and sitting down keeps the silt moving underneath them and this silt is fluid and it will go anywhere. It will fill the hole up but if you take the boat away the hole will fill in in no time at all.

**Mr WING** - That was long after the PLA stopped dredging that the movement of the ships and the propellers controlled it to some extent?

**Mr DICK** - Yes. They did have a positive effect on the areas that they were actually working in. They kept it clean and they kept it down with the comings and goings. That does not happen anymore so we have now got virtually a sterile area where there is no activity and of course we have an increased amount of silt. The make-up of the silt is that the longer it is exposed to the weather, to the sun, particularly the sun, the greater it will increase because in our tests when I was the chairman it actually dries the competition of the silt out and leaves quite a strong layer over the top every day for the new lot of silt to settle on. So it is a rebuilding situation which gets worse, and the longer it is exposed to the sun the more that happens and the quicker it happens.

That really is what has been happening for quite a long time. It is one of the reasons we had our dredging program structured into two parts. One was to maintain a channel in the river which was navigable to 2.5 metres below low water and the rest was a batter up to the high-tide mark which did not allow the banks to slump in but give us the aesthetic look that we were after. There are two things. One is the actual depth of the river for navigation purposes and the other is the aesthetic look for the City of Launceston. Both of them are equally important and both of them come under the guise that in flood mitigation it all revolves around, and I have here in my notes, the most important thing is flood mitigation. The only risk that Launceston suffers from is flood. Other than that the river could do what it is simply trying to do now, return back to the 1800s. That means a much smaller river because there is none of it that is not man-made. There is no natural river there. It has simply all been made. It has all been made by the PLA and various other people and for good reasons too because this was our only port and as the ships got bigger it was dredged wider and as old Doug Foster would say, it is just trying to do what it has to do. It is trying to return back to where it was.

One of the things it seems to me is that people do not want to accept a smaller river. They want it like it is now and I cannot see any reason they cannot have that either. It is easily achieved. When I was the chairman there I ran the committee probably a lot different from how it is run now.

**CHAIR** - By the committee do you mean UTRIA?

**Mr DICK** - No, not UTRIA. No, the Tamar River Improvement Project Committee and then they changed it.

**CHAIR** - To?

**Mr DICK** - To UTRIA. While I was there, and I do not want to blow my own case up or anything, but I used to run a very, very strict meeting and I would not let anyone get out of line. I have started off a meeting today talking about where we are going next and within 10 minutes of not saying anything someone is trying to build a boardwalk at Rossarden.

*Laughter.*

**Mr DICK** - And it still happens today. I used to say, 'Hey, don't not go there. Just get right away from that. It is nothing to do with us. We are not building anything anywhere else and we are not doing any other work. We are going to dredge the river and that is all we are going to do. So you can shut up.' The same with people on the committee nodding their head. I used to say to them, 'What are you nodding your head for? Do you know what we are talking about?' and 99 per cent of the time it would be, 'No.' 'Well, do not nod your head. If you do not know, put your hand up and say "Please tell me what we are talking about."'

This is the way committees used to be and I believe that we do not have that anymore. It seems to me that we do not have the people that are there enough. It is probably unfair to have the council shouldering all the responsibility of the river. I have been very vocal in saying that I do believe that the council is an inappropriate body to actually manage the dredging operations and the planning and, most of all, the maintenance of what has been done which is where they are falling down now. They simply have not done any maintenance and have not maintained the areas that they have dredged. If there is a story in the paper today about a particular part of the river then they seem to go and pick everything up that they have been doing and go and try to alleviate that problem, which does not assist the dredging program at all. As a matter of fact it becomes hopscotch, there is no structured plan. I am rambling on a bit but these are just a few of the things that I touch on.

**Mr WING** - It is very helpful that you are giving us that information.

**CHAIR** - When you say maintenance, Les, do you mean that you do a dredging in an area but then you keep working on that so that it does not then fill back in, so that once you have done the bulk of the work it is easier to maintain?

**Mr DICK** - Yes. For instance, if we had a budget of \$600 000, bear in mind that there is a fair proportion of the channel in Home Reach and beyond Home Reach, and particularly from the tailrace down to Stephenson's Bend. That stops in regime. That does not alter very much at all because the flow that comes out from the turbines keeps that silt moving. We dug a 10 000 metre hole in the middle of the river there just to test how fast it would fill up and its effectiveness in stopping the silt from migrating into Launceston. That worked very well. We had that filled up in less than 18 months, just natural silt, in an area that we knew we could go back and service again and quicker than we did because the slowest part was digging the original hole. Then we have only very fluffy

silt in it and that 10 000 metres did not get into Launceston and did not get to build up and so forth.

**Mr WING** - What did you do with the silt that you took out to make the hole?

**Mr DICK** - Put it in the ponds.

**Mr DEAN** - Les, it was suggested to us, and it might be the wrong time to raise this, on that dredging process that it disperses a lot of the silt but it only takes about 20 per cent of the silt that it is after. It gets about 20 per cent and the other 80 per cent just disperses back into the water, floats around in the water.

**Mr DICK** - Whoever told you that does not know what he is talking about. It is true up to a point. A cutter suction dredge if you like needs a face to work to. If, for instance, people directing this dredging situation now do not have the knowledge of how a cutter suction dredge works then it would appear to them that they are dredging, but they are not. They are doing exactly what you have said. They cannot go and do maintenance dredging until you reach 1 metre above where you dredged to before, which is a good thing. In a lot of areas once you take it down, it might take three years to get back to where that is. By monitoring the depth you do not go anywhere near it or redredge it again until such time as you have a face to work to because a cutter suction dredge works on that principle that everything falls into the head. The pipe is in the middle of the head.

I do not want to get off this subject but one of the things that does happen is the smaller your dredge, the higher the degree that you are talking about. So the current dredge, without a 1 metre head on it, and as it gets down smaller and smaller and smaller, becomes less efficient because in the event that mud will stand up in a face like that. It will stand there all day while you are working and then it will slump down during the night. When you are working your face you are working in under a shelf like that and this is crumbling down and if you have a 12-inch or a 14-inch pipe nothing comes out. It does not disperse anything. So what you are talking about is true to a certain degree but that is lack of knowledge on operators. Operators should be saying to the people on the council or whoever is directing them to do it, 'Sorry, you are wasting your time.' All you are going to do is put the silt into suspension and it is going to land behind us or somewhere over there.

**CHAIR** - Les, you talked about the water coming out of the tailrace. You are of the belief that that holds the silt that might otherwise come up the river towards Home Point?

**Mr DICK** - Oh yes, that is a proven. Regarding Doug Foster's work, I have the greatest admiration for old Douggie, he is a very, very practical man and a professor and I have the greatest of respect for him. I was very, very pleased when I was the chairman to have him sitting alongside me so that whenever there was a doubt or whenever we could not answer a question adequately within our committee, I would say to Doug, 'Doug, next time we have a committee meeting I want that on the table.' I would have it there. I would have an explanation, answers and something plausible rather than sweep it away and not have it and not attend to it.

**Mr WING** - I am not quite sure what that question was. You are saying that water coming out of the tailrace blocks the silt coming back being washed back up.

**CHAIR** - Back into Home Point.

**Mr DICK** - Migration.

**CHAIR** - How much migration does it stop? All of it?

**Mr DICK** - No, because it gets past it because the flow of water coming out of the tailrace does not exceed the inflow. Are you with me?

**CHAIR** - Right. Okay.

**Mr DICK** - Wherever you have the most powerful stream, and unfortunately in the Tamar the tide still only takes six hours to come in and out but coming in is its strongest phase. It runs stronger for a longer period so it overpowers the tailrace and any activity in the tailrace on its way in. It transports material but the tailrace has the ability to limit that. That area stops virtually, it does not change much and you will see that apart from when it falls out at Stephenson's Bend, when it falls out opposite the Grammar rowing sheds, that is a fall-out area there, but I am talking from there, from the green navigation light there back up to the tailrace, that stops in what old Doug used to call regime. It does not move. That has not experienced any siltation or whatever for quite a long time. It builds up to a certain thing and then it goes away again.

**CHAIR** - Is the power generation done in accordance with the tides to maintain that system?

**Mr DICK** - We did those tests. We actually worked with the Hydro and we did the test in phase with the tide for quite a long period of time. They did not make any significant difference. There simply was not the volume. It is okay with the volume of water coming out there now to say that goes a long way towards arresting silt, but in actual fact to use that tailrace as a mechanism to stop silt coming into Launceston you would need to be at four times the amount of volume to make any effect on it at all.

**CHAIR** - And constant.

**Mr DICK** - Yes. That is what I mean. It would have to be constant to keep it going.

**Mr WING** - Because the incoming tide being stronger than the outgoing tide continues to wash it?

**Mr DICK** - You would have to get it overpower that tide and you are going to need a lot of water to do that.

**Mr WING** - Associate Professor Brian Jones of Wollongong University said that it forms a wedge, that the water coming out of the tailrace is in the upper level of the river and the incoming tide brings the silt in underneath it, forming a wedge.

**Mr DICK** - Yes, it does.

**Mr WING** - So the effects of the water coming out of the tailrace have limited effect, do they, on reducing the amount of silt and only while there is a considerable volume of water coming out of it?

**Mr DICK** - Yes. We did extensive work on that and we documented it all and we came to the conclusion that that was best left doing its work as it is now. I have to say we did find Hydro very, very difficult to work with and that is one of the very strong reasons I suggest that an authority should be formed for the dredging and that authority given the appropriate powers to ask the Hydro to work with them, particularly in times of flood. For instance, we tried to get the Hydro to work with us in the face of an imminent flood in Launceston. Absolutely everyone tells us there is going to be a flood, then we requested the Hydro to start to lower the dam, to start to let it run in phase with the tide and get the water running on the outgoing tide and let as much out as they could, knowing full well we were going to be full the next day, but we could never ever achieve it. The simple fact is that we could not achieve it because we were nothing. As future committees have been, we had no power to direct the Hydro to lower its thing, and I have written in here that they used to always calculate their water into dollars and I used to say, 'Bull shit, it is wrong. How can you do that? It is not dollars. We are going to replace it. There is umpteen zillion, million cubic metres of water coming down in a flood and you have three days. We know it is coming and we want you to let as much water out of your dam as you can so we can use it as a buffer. We only need a buffer for three days and then you can let it fill up and you can let it come out again at low tide', knowing full well they are not going to lose one ounce of water, it is not going to interfere with the level but it is going to give the City of Launceston breathing space to allow water to run.

**CHAIR** - With the letting out of that water, Les, would that also scour the basin?

**Mr DICK** - Immediately, yes. The other thing that we had in that was the old tried and true, Hydro's release of water. Years ago, whenever there was a flood and with the dredging that went on, we also used a raking method with the vessels. That was very primitive inasmuch as the PLA's tugs used to come up. They built themselves some big rakes and they used to pull it down and then it would take a half hour to turn round and then they would have to pull the whole thing up against the tide and then they could not get up because as soon as ever they started to turn the whole thing would go back down the river again. But it did work wonderfully and did move thousands and thousands of tonnes of silt.

**Mr WING** - Would that be more difficult now because of the build-up and the fact that silt has been there for so long?

**Mr DICK** - No, today it is very, very easy. The main problem, in my view, is the action time and not maintaining what has been done, not handing down information and not having people on the committees who have the experience to be able to say there is a practical solution to this.

**Mr WING** - Would you also say not having any authority or body that is directly responsible with power to do something about it?

**Mr DICK** - That is one of the most frustrating things to everyone on the committee, the fact that they do not have any power. I read that the Farmers and Graziers were said they would oppose a body being set up, and rightly so too. Every time something like this happens and a body looks like getting set up they do exactly what I said, for example they start building boardwalks at Rossarden. That is why the terms of the charter given should only be that they should be an authority whose interests are only vested in a given area and that area should be what we call proclaimed so that outside that they have no jurisdiction.

**Mr WING** - Should that include the catchment areas?

**Mr DICK** - No, no, because once you move away from the river, onto your committee comes everyone else with alternative ideas and methods and you get away from the real crux of the matter. The committee's job is to manage the silt after it is in the river. How it gets there should be someone's else's job. Look at the catchment area; look how big it is. It is hundreds and hundreds of square miles and it is not only the poor old city of Launceston, it is all the other municipalities and the lead in from everywhere. It is planning. I will just give you a quick instance of something. We are building the Tamar Highway.

**CHAIR** - The East Tamar Highway.

**Mr DICK** - The East Tamar Highway. To my knowledge there is no silt retention plan at all. All of the activity and all of the streams and little outlets and everything that come in below Rosevears, higher up than Rosevears, will all come back into Launceston as silt. The rest of it will go out to sea because there is a plate at Rosevears where the water goes like that. That is the plate to sea and that has two or three drops as it continues to the sea. Something put in the water below that will not return to Launceston. It does not matter, it will simply go on its merry way to sea. Everything that is in the water from there up will become silt in the city of Launceston.

So you have got your silt retention. Your greatest potential was not dredging, it was retention, managing the silt before it gets back to Launceston. One of the biggest contributors is the actual city of Launceston and its run-off. I do not know how you are going to change that and I probably do not think you can. Council, you know, has its own retention base and only one for the whole city at Margaret Street. You have natural erosion for the entire catchment area. That is every river and stream and gutter that ends up in the Tamar River. You have your forestry activity. I do not believe that forestry activity is as much to blame as some would say and my reason for that thinking is that St Patricks River above the weir at St Leonards, the little rock weir there, is crystal clear and you can drink it. Below the weir, 10 feet away, you could not drink it because it stops there, and the water is crystal clear and drinkable. It is the same up the other end of the dam here. You have the same situation there. Crystal-clear water that you can drink and it is only the silt that is migrating within that. In the last 10 years -

**Mr DEAN** - Les, can I just cut you off while you are on that. In your view, does the Ti Tree Bend sewerage plant add to the siltation problems?

**Mr DICK** - No, I do not think it does significantly. I think that the council's tertiary treatment plant works very well. If it gets into a situation where it cannot handle the water then there is no option but to put it in the river, but I believe that that is not a

significant amount. It is stormwater drains that carry a load. The East Tamar Highway, for instance, is a major earth undertaking, with no plan for silt retention to hold it where it is, where it can be let run off. Down there you see they have the holes dug with a clear away to keep the water away and it just goes down into the bush. That will find its way down into the river and carry its silt load with it. It will keep on doing that with successive rains, and even with the highway you will get it. This is the sort of thing I am trying to demonstrate, that silt retention and stopping the silt from working its way into the river is one of the major things. It is one of the things that we as a committee spent a lot of time on and we were frustrated because we could only surmise in a lot of cases because we never ever had the back-up of anyone because we had no teeth. We could not say to someone doing something, okay we would like you to put something in there to monitor what the silt run-off is going to be there on that project.

**Mr WING** - With the roadworks on the East Tamar Highway and silt flowing in unchecked, isn't it the same with clear-felling of forestry close to the rivers in the catchment area?

**Mr DICK** - There is no clear-felling close to the city of Launceston and the two rivers that actually are running into Launceston are both crystal clear at the point at St Leonards and at the swimming hole in the Gorge. The last time they lowered Trevallyn Dam, lowered it right down, everyone was expecting to see millions and millions of tonnes of silt. It simply was not there. We know that it gets transported and it goes over the dam and it is in the water, but if it were to the same degree as in forestry then we would have discolouration of the water. Natural erosion occurs all the time in every creek, the wash-outs at the bends. If we get a big rain now we will end up with logs and rubbish coming from everywhere. Dislodgment happens because the conditions have changed in the areas where they are, the soil has become dry and cracked and has fallen in, and the clay cracks open. As soon as you get a rush of water that goes in and it all comes down to here.

**Mr WING** - We have been told that most of the silt comes in at flood times. It comes in over the Trevallyn Dam and then washes down the river and then gradually it is washed back up.

**Mr DICK** - Well, true because then you have a condition which is not normal. If we only worried about the abnormal times, for the last five years we have not had an abnormal time but still we have had an increased rate. We have had the lowest flow of water that I can remember here and yet our rate of siltation has dramatically increased. It may not have increased as much as we think but there is more of the mud appearing because it has simply come through. It has got to a level where now it is more evident at a longer time. It is higher now than it was; it was one-and-a-half or in some places probably 2 metres above low water and it will continue to do that.

**CHAIR** - Les, I would like to ask you about removal of silt and the use of it and the opportunities for us to store it and to build up the sides of the river, or to build up those what do you call them, the basins that they are put into, and then the use of it.

**Mr DICK** - The silt ponds?

**CHAIR** - Yes, the silt ponds.



**Mr DICK** - The use of the silt after it has been used, after it has been collected?

**CHAIR** - Yes.

**Mr DICK** - When we did the first tests on it they came up negative. The silt could not be used for anything to do with a garden and for you to grow your vegetables in because of the amount of cadmium it carries into leafy vegetables such as silver beet and lettuces and all that. The cadmium is transported. It will not hurt spuds, it is not in them, and it will not hurt stuff that is grown in the same ground but the cadmium will come into a leaf plant and will stop in a leaf plant. Even though it was only, I cannot even think of how many noughts is behind it per parts per million, it was still considered that neither the committee nor the council could actively promote it for giving to your garden or selling it or allowing it to be used in a situation where it might eventually end up in that situation.

In saying that, with what they are simply doing down there now I do not believe there is any old silt left in there because we dredged the whole river and it has been dredged for years and each time it is dredged there is less. The run-off from this city which I mentioned earlier is where your potential contamination comes from that stuff. We have got all new silt there now and that is what is disappointing. We have done all the digging, we have been down to where we have got to go, we have dredged the whole of Home Reach, we have dredged all the sides. It has all been done and this is all new silt and this is what makes me so disappointed and angry about successive committees, that they have not even been able to maintain what we had once done.

We had it to a stage where it only ever needed to be maintenance dredging. There was no new dredging to do and they could not even manage that and that is why I am very, very strong to have an authority set up with a proper guy running it, that can pass on the knowledge. For instance, TRIPC left all the documentation. Our silt fences have just fallen down. The fences are still there. We had 6 feet of mud trapped in an area concerning which, in conjunction with Doug Foster and some other people, we said, 'We can trap this silt. We can actually maintain an area and we can build it from being there up to there simply by trapping it. You do not have to dredge it, just trap it and it will do it on its own'. It did it wonderfully. We put 6, 7 feet of silt in an area, a huge area. We had all our silt curtains up, we drove all our poles, put them in and as the tide came in, a certain amount of silt would go in there and drop there. Then each day the sun would shine and a little bit more, a little bit more. We built it up to 7-odd feet. Then successive committees are not even, I am sure, aware that the silt fences are down there, that the money has been spent and they were allowed to fall down. Today there is 7 feet of silt that has come from those retention things that we did down there which is in the City of Launceston here. It has gone because they let it all fall down. There was no maintenance.

The council has changed, the councillors themselves change, and there is no mechanism to pass this on to the new bloke. Look at this council; it is a revolving wheel for people. They are all part time. There is no-one permanent on the council. You have either got a contract or you are in there for five minutes. Well if you can get on that committee that is all right; it takes care of a couple days a week. Beautiful, I will go and sit on a committee somewhere. Most of them come there without even the faintest knowledge of what they are doing and they leave with some, they take it with them, and the next bloke is sitting up there saying, 'I am on this committee. What am I doing here though? I do

not know what I am doing. I have never had anything to do with this'. If an authority is there and the chair is in place on that authority, they can make sure that with anyone that works for them, that knowledge is documented and handed down and someone is always there like I am telling you guys now of silt ponds. I am telling you that we did a colonisation program down there where we took down huge tyres, we cut holes in them, we took the soil from the little island there and we dug that out with an excavator on the barges, we took it over -

**Mr WING** - Tamar Island?

**Mr DICK** - Yes. We placed it in the big tyres. We bolted the tyres together and we got them to sink because we cut holes in them so they would not float when the water came up. We actually built little islands, bigger than this table, and we put the rushes in them. They are still there today and still working but no further work had been done to promote growth on the areas. When that 7 feet of silt got trapped, upon that reaching its levels there should have immediately been a planting situation in the area that we have now got up above. All of the area down in those flats will not promote growth because it is under the water too long at every tide phase. It does not have to be lifted very far before you can colonise it with plants. They will grow through as the mud settles in them. They will grow through and get higher and higher and then you do away with that vast area and that is not contributing to the silt load in Launceston. You have stabilised an area. Nothing has been done in 10 years to stabilise one foot. Nothing. It has all fallen down. I go past it every day and I think I could choke some of these fellows. How dare they let it happen. They let it happen because they have not got a proper committee, a properly structured thing, and they have no-one at the helm who is singularly driving it.

**Mr WING** - And not enough power anyway.

**Mr DICK** - They have no power. I would like to see something like, for instance, the Army Corps of Engineers. That is a good example where it is set up by the Government. They are State and Federal and whatever it is and they are given the task to identify various things that the community needs. They are in charge of the Mississippi River and the various other things, and flood levees, and Christ knows what. I do not say that this committee should do that but maybe it can be done, it can be used for more than one purpose because if it gains the experience, it could be used at St Helens to the State's advantage. These people then have proper structured, documented work and they take that to the council, to the State Government, and most of all to the Federal Government.

I believe very, very strongly that we would never ever, ever get a sizeable Federal contribution for the eradication of silt and flood mitigation in the City of Launceston until we had a proper authority to administer the money that was given to them, if any was given, and in any case there has never been, in my view, a proper case put forward that any politician could take to Parliament and say, 'Here we are, we have a problem here and we are asking you people for \$3 million over the next five years or \$3 million per year over the next five years. Here is what we want to do. Here is what our committee is in place to do. Here is what the project's projected outcomes are', and it has never happened.

**Mr WING** - That sounds very good. When you were Chairman of TRIPC how many members were there?

**Mr DICK** - The TRIPC was made up of a representative of a representative from the West Tamar, a representative from Launceston City Council, a representative from West Tamar, the Port of Launceston Authority who was then virtually in charge of the river and environs and lights and so on and most of the land in Launceston was then proclaimed land for the port. So in actual fact, the port was the landlord of most of the city. We were all in there.

**Mr WING** - Were they people with technical knowledge or elected representatives?

**Mr DICK** - Some of them were elected. The councils elected one of their guys to come along and sit on a committee that I chaired. Then we invited and paid for blokes like Doug Foster and other guys and we sought information. We had guys come out from Europe, Germans, we had the girl out that has done the rice grass, that put it all in. We would bring her into the committee room and introduce her to all these guys and explain that we had asked her to come to explain to them what rice grass does. We have this German guy here because they have been dredging and five of their rivers in Europe are exactly the same as the Tamar - they run in faster than they run out. It still only takes six hours.

**Mr WING** - Which are they?

**Mr DICK** - I cannot tell you, Don. I know there are five of them.

**Mr WING** - Five in Germany?

**Mr DICK** - No, in Europe. There are not many of them in the world but there are five in Europe that actually have the same mechanism. They could not believe what we were doing with silt ponds even, particularly inasmuch as we did not have an end use for silt ponds nor the residue, the silt once it came out. The only silt ponds that they use in Europe now are when they are dredging known contaminated stuff that they must contain. The rest of the stuff in a post-dredge area is simply taken to sea. When I showed these people the maps of the Tamar River and the depths and so on, he suggested to me that very, very close to the city of Launceston was the point at which you could enter this silt and it would never return. It would never have to be looked after and it would simply go to sea and be dispersed with no detrimental effect to anything, and that testing be done just to make sure that you have a paper that says our silt contains this. And it does contain a mix. Cadmium is off your roof and off your various other things, and whatever waste does reach it from us.

One thing we could never get done and the reason was that we did not have an authority and we had a committee with no teeth. One of the greatest assistances that I could see that happened from the visit from our German people was the fact that we had never used radioactive silt, which is only an isotope that is made and can be introduced into this river at any point that you want. You can introduce a 44-gallon drum of it or a 20 litre drum of it and you can track the silt every day from up there. It was going to cost about \$30 000 and we could not even raise \$30 000 that would give us a look at what silt movements are doing. At the moment I say to everyone that what they are talking about is just a rough guess. You do not know where it is going. You don't have a clue where the big settle-out places are that would have given us an insight straightaway, and very

cheaply, into where we would look at our silt retention program which was part of the dredging program. We just did not have enough teeth to be able to raise the \$30 000, which was a disappointment because we would have had charts that showed us the movement of silt in the city of Launceston from Nelson Shoals at Rosevears right through to the city of Launceston. Every one of those pieces of silt could have been tracked, how they disperse could have been calculated and collated and then with the weather conditions we would have had a pattern. At the moment there is none. But we have all these experts, and the college now wants to get involved in doing things that have been done 20 years ago. Yet the simple, ordinary and cheap things to do we missed because we did not have a proper committee. The guys on the council will not do it; they have too many other things to do. They are too part-time. It's a case of 'Oh well, we will go down and have a look at it.'

**Mr DEAN** - I do not disagree with that comment.

**Mr WING** - I agree with that.

**Mr DICK** - I do not want to be critical of any particular person or anything like that but the river demands full-time attention from at least a few people with the power to make it happen and to put these things in progress, and to make sure that the silt fences are put back up again, that colonisation of that. That is all saving money. We estimated that every four years we would save a year's dredging.

**Mr DEAN** - It has been an ad hoc approach. You are right.

**Mr DICK** - Just through simple, easy-to-do stuff. You do not have to be a technician. It's just simple stuff. I used to put the guys in my punt. I would say, 'The meeting is at 10 a.m. and I want you all here at 9'. 'What are we doing?' 'Don't worry about what we are doing. We are going to the river to show you something.' We would go down on the incoming tide, early in the morning, and we would stop down there for an hour. I would just run the punt straight up onto the edge of the river and they would all stand there and we would wait for the wind to pick up and the tide to come in and then they would watch the little waves, only this high, breaking. It was a demonstration of what happens when the waves from the wind and the tide coming in just break along the shore in rows of seven and run along like a little furrow and dig 25 millimetres of silt out of every one of them and put it into suspension to be carted back into Launceston on that incoming tide. I used to say to them that that is why it is important for silt retention to happen. That is why you have to start thinking about silt retention because this is where we have to stop it. Dredging it out and putting it in the silt ponds is one thing but knowing that it is coming in as fast as it is getting taken out at the other end is a no-win situation unless you use some mechanism available to help us arrest it all.

It's the same with silt pond management. There is no silt pond management now. We still have to manage the boards, lower the silt ponds of a weekend. We could get two days of dredging into that silt pond before one pint of water would run out. The silt ponds are inadequate for a dredging program. They simply do not hold the volume and you cannot dredge when they are empty, and that is when we had the Grammar School ones which we do not have anymore. When they were empty we could only dredge a maximum of 1 000 metres a day but not for very long because as they fill up the retention time becomes less because you have less volume for it to fall out in. The silt

management, the pond management, with our boards and so on in the outflow becomes even more critical. Over the weekend we used to take the boards out as it all settled down when we stopped dredging. On Monday morning we would have it all dry and we would put all the boards back in at 6 a.m. Monday. We would get nearly two days' dredging before one pint of water went back out. I have been down there, sticking my long nose into affairs down there, just to see how silt and pond management has been going on and I had to call the Launceston City Council and threaten to get the *Examiner* down there if they did not send an engineer down there immediately. We were paying \$8 or whatever it was to get it dredged out there and it was running out the other end in a solid stream. I said, 'Either you blokes come down or I will get the *Examiner* down, or the *Mercury* or someone, to show them what a bunch of whackers you are. You do not know what you are doing.' So they came down and stood there and stopped the dredging with burdens, and that is when the big row started with the mainland one - burdens because they could not keep dredging, which meant that they could not earn the money that they had thought because of the capacity of the silt ponds was not big enough. So that contract ended up getting annulled didn't it?

**Mr DEAN** - How do they stop the silt now, some of the silt running back out from the silt ponds?

**Mr DICK** - It is supposed to be managed. You have the ponds and then we had doors in the ponds at various places and you would pump it in over here. You usually pump at the furthest point away from your outlet. It will go as level as a billiard table but you need the boards up on this one and then it flows over there and down to this one, and with the boards up on this one it flows down onto this one. You have to have the boards, say, at this end of this one, and at this end of this one, that end of that one. You are managing them all the time, playing a game with them - a little bit out of that and a little bit out of this. It was really important for silt pond management. It was an integral part of dredging. I did it because at that time I was the dredging contractor and I could see that we were not going to fill these ponds. You could see that the mud was going in it and it still does it today. You are paying to pump it out and it is running straight back into the river to a large extent because it does not have management. There is no-one at the top, there is no-one on the committee like TRIPC had, there is no-one like Les Dick, for instance, to be down there at 6 a.m. when the dredging started and say, 'You did not empty the ponds last night' or 'You did not do them over the weekend'. So they are still full and they are just full of water so immediately you start pumping, the silt gets transported. You cannot stop it, it is too fine. You have to try to control it and give it retention time.

I have got in here that I believe that any dredging program started at the moment would be fundamentally flawed because you do not have a retention time. You just have not got it.

**Mr WING** - If you were appointed chairman of an authority today with some reasonable funding and adequate powers to deal with the problems in the Tamar River - silt, flooding, et cetera - what action would you want to take to deal with the build-up of silt that is there at the moment? The first thing, what action would you take in relation to that, build up near the wharf where the boats are and the narrowing of the channel?

**Mr DICK** - We addressed that in a meeting with Robin Gray when he was the Premier. Politically it was very unsavoury and I suggest that it is today that the river is in the condition that it in. It should not be like it. We said there is two parts to this. One is an aesthetic part. One is what we do because we want it to look better. It really bears no relation to flood and it bears no relation to the actual condition of the river but it will give us more water over an area for a longer period. Then there is the navigational part. So we issued a contract and we made sure that we had a 50 metre channel, say 600 metres long, and then we had the batters either side so that it battered down. If you go and dredge straight into the bank you will have the bank cave in because we already did that.

We did that as an exercise and we finished on the Friday night and came back on the Tuesday after a long weekend, I can still remember it, and the walking track and the willow trees and everything on the West Tamar were all in the river with a big bite out of it. We simply took away and the bank could not sustain the weight that was there and they had put the walking track on and everything. They just took willow trees and everything straightaway. So we said we would stick to what we had been told by blokes like Foster and we need to batter, to batter up, and we need to batter to be in such a state, such an angle, that we do give an extended period, albeit it is only aesthetic. If you went to drive a boat on it you would run aground.

There are two parts. A lot of the 50 metre dredging thing could be done quickly because as I was telling you, some of the river remains at 3 metres all the time. You could simply skip over that, do your 50 metres, come back and start doing your batter up either side. You had to maintain that and then we issued another 600 metre contract in and all the time we would look at our money. We have allocated  $x$  amount of our funds that have been given to us and we have this much for dredging, we have this much for silt retention, we have this much to pay Doug Foster and the other people that we asked to assist us, our consultants and so on. We had a little mini-budget with the amount of money that we knew we were going to get. We did it like that. And it worked. It worked in no time at all.

**Mr WING** - What years were they?

**Mr DICK** - Oh, I cannot even remember, Don.

**Mr WING** - Just roughly. Which decade?

**Mr DICK** - In the early 1990s; the late 1980s, 1990s. We were able to do it and achieve it. We did have that river under control. It is simple things like Errol Stewart, for instance, put his marina in and that is all right. It was always known that from the day that he put the marina in he was in trouble because there had been no work on Home Point, opposite Home Point, to take the batter down there to allow the river to turn round and the river actually gets hydraulically guided up the basin and then it comes back round and back to Errol. When we operated the dry dock you could stand there and you could throw a stick out in the water with the tide running out once Town Point became evident. As the tide receded and the mud became more, you could chuck a stick in and you could sit down and have a beer and back it would come. It would go down and turn round and come straight back up to the dock and stop at the gate door.

When you lowered the area there down, not take it away, the council was always in opposition to us dredging in that point because they believed that it was weak and the levee was weak. I used to get very, very upset and I would say, 'The levee belongs to the State Government, the council and the Federal Government. The Federal Government gave you the money to put it in and you put it in and you have not maintained it. Best I get over there and dig it out and let it fall into the river then we will fix it again, properly this time'.

**Mr WING** - You did not go over and dig out the other one out that fell in?

**Mr DICK** - Beg yours?

**Mr WING** - You did not dig and cause the other one to fall in on the opposite side of the North Esk?

**Mr DICK** - Yes.

**Mr WING** - The \$3 million one?

**Mr DICK** - No. They built that without learning anything.

**Mr WING** - So what are your views on that one?

**Mr DICK** - It should never have happened. Whoever did it did not take into consideration the hydraulics of the river. That was always going to happen. What a stupid thing. What a waste. How are you going to convince the Federal Government to get involved in another project having egg on its face with that one? If I was in Federal politics I would say, 'You fix up the one you got at no cost to us and convince me that it will not happen again and I will go in and bat for you but I will not go in and bat for you under your present regime'.

**CHAIR** - Les, this conversation could get more and more interesting as the morning wears on. However, we have Ross Broomhall waiting. I am just wondering, Les, if there is any message that you would care to give us in reference to our terms of reference in conclusion.

**Mr WING** - Mr Chairman, could I suggest another alternative. If Mr Dick has the time, he and Mr Broomhall could be at the table together because they have similar views.

**CHAIR** - Okay. I will get Les to wrap up and then Mr Broomhall might care to join us.

**Mr DICK** - In wrapping up I would just like to say that I cannot - and I wish I could say it - see a successful dredging program or successful improvement in the condition of the river under the present management. It simply will not happen. It is bigger than that and because it involves Federal and State and the money of everyone who lives in Launceston and surrounding districts, I think it is incumbent upon the Government and the powers to be to set up a proper authority, give it the teeth, and make sure of all the money that is pledged to it from Federal, State. Another thing that I have always believed is that Federal money should go into the council coffers. They do not like that but if it went into an authority's coffers it could explain every last dollar, of it; where it went, who it paid

and initiating tests to be done. There should be a proper evaluation of who can do them and invite people Australia wide and indeed world wide to participate with the funds available to pay for it when you have selected who is going to do it.

I just want to be critical on one thing. You put a new bloke in who is locked into the Maritime College. He is in there three weeks and the first thing he does is criticise my boats in the river which have nothing to do with dredging or the condition of the river. Secondly, he says, 'We will get the Maritime College to do another test'. I nearly spewed, I nearly chewed the *Examiner* up. I thought, 'Here we go again'.

**Mr DEAN** - UTRIA has now been wound up, as you are aware, and there is the new authority in place under local government. What is your position in relation to this new authority that now has the responsibility for the river at this present time?

**Mr DICK** - I do not know. I honestly do not even know that they know where to start.

**Mr DEAN** - I am not on it. I wanted to be but I am not.

**Mr DICK** - But honestly, do they know where to start? Who have they got on it?

**Mr DEAN** - I think the general manager of the council is involved, the mayor is involved, and then we have three or four others. I have got them here. Dr Wood, yes. I should know them all.

**Mr DICK** - What are their credentials? What does Albert van Zetten know about flood and know about the river and know about dredging? Absolutely nothing. What does a city manager know? Absolutely nothing. Everyone who comes onto this committee goes through a period of learning. These guys that you just talked about, in my view, have not the time to learn about the river. It is only given piecemeal, it is on the agenda today and it is forgotten about by dinnertime.

**Mr DEAN** - I cannot deny or answer those questions because what you have said is pretty much what I said at the time it was being set up.

**Mr WING** - If you were appointed chairman today and you had the authority to appoint a committee, how many would you appoint, what type of people representing what and with what qualifications?

**Mr DICK** - On the committee itself, an authority for instance, you could invite a member from the council.

**Mr WING** - A technical officer, engineer, or an elected representative.

**Mr DICK** - No, not an elected representative because he is part-time once again and he is probably not capable of absorbing the problem that you have or documenting that in a way that can be passed on to the next guy who sits in his place.

**Mr WING** - I understand.

**CHAIR** - A city engineer do you think, Les?



**Mr DICK** - Yes, an engineer-type person is handy because even if he does not know much about the river it will not take him long to get a grasp on what you are trying to do and how to go about it and he will have some expertise that he can bring to the table. I made myself quite unpopular by getting rid of a couple of representatives who were sent to me because they were late for meetings, and they absolutely did not know the first thing about anything. I was not going to sit there day after day trying to teach them when they did not know. They would be nodding their heads like this and I would ask why they were nodding their heads.

**CHAIR** - I am trying not to nod my head.

*Laughter.*

**Mr WING** - What other type of person?

**Mr DICK** - You certainly need access to a Federal member because you are going to be asking the Federal Government for finance. He could be on the committee, but the people who actually make decisions around the table about dredging programs and so on do not need to be connected or have any power over them at all. They should be an authority. For instance, Jack Edwards or someone like that could be in the chair and he will say exactly what happens. It will not be driven by council's purse strings or whatever, it will be driven by the amount of money and the budget that is asked for. So, if you put it all together and the committee sits round the table, the engineers and everyone with us here, we say that to undertake to dredge 30 000 cubic metres out at x amount of dollars we need such and such. We need a contingency sum of this amount. We want to carry out works on retention, we want to rehabilitate the silt retention methods that have already been done, we want to spend x amount on that and we want to improve on that when the tide and the phase and everything is right. It's no good trying to go out in the middle of winter so it is a summertime job. We have to keep money aside for that.

We want to monitor what we have done, what has previously been done and we also want to record our achievements. I was always frustrated without the proper documentation of what was achieved. People are not going to give money, nor our State Government and you politician guys, to something that is going to go out the door. It is different if you can see an achievement. I used to plead with them that you have to show the Federal Government that you can beat this problem, and then you will get the money. What politician is going to be interested in someone chasing their tail in the city of Launceston in an unwieldily, ungainly committee, with no expertise on it and no set plan?

**CHAIR** - I think we might just need to hold it there. As Don Wing suggested, Mr Broomhall, you might care to join us at the table and be sworn in and then Les might care to remain there and assist Ross as a double team?

**Mr WING** - If that is acceptable to you both.

**Mr ROSS BROOMHALL WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.**

**CHAIR** (Mr Finch) - Ross, welcome and thanks very much for joining us here today. I see that you have given us a submission. Would you like to read it?

**Mr BROOMHALL** - Actually it is just an open letter in answer to a meeting that I went to in April 2008. It's just a general thing. Would you like me to read it?

**CHAIR** - Yes, if we could just take that in evidence and then we will ask you some questions. Ross, I might point out that we are a little pressed for time.

**Mr BROOMHALL** - It was with great expectations that I attended the LCC UTRIA public forum on the silt problem in the upper Tamar estuary on Wednesday 2 April 2008. What a disappointment.

Andrew Scanlon from Hydro Tasmania's presentation stated that the Trevallyn Dam had no impact on the build-up of silt in the Tamar estuary but omitted to mention the impact on the yacht basin adjacent to the Gorge mouth. The PLA's own modelling showed that the water flow down the Gorge daily kept the yacht basin clean on the eastern bank and prevented mud silt from settling in front of Kings Wharf from Town Point well past Brown Street. This was known from the 1960s. Perhaps Hydro Tas should revisit the proposal to build a small power station in the base of the Trevallyn Dam, thus producing higher environmental flows through the Gorge. It would be magnificent for Launceston and probably provide 4 to 6 megawatts of electricity with a Francis-style turbine. Mr Brayford's presentation showed a pole about to be driven at Aurora Stadium, but before it was hammered it slid down with its own weight. I think most people would realise Invermay is an old flood plain of the North Esk and it would be soft as the water table on average is a metre below the soil surface.

Then we were shown water bubbling up from under the kerb at the wharf end of Fossil Creek which appears at every high tide. This has been happening for at least the last 15 or 20 years coming from under the old valve shed on the nature strip.

Mr Brayford mentioned newspaper articles from the 1800s which reported a stench from the river and mud sludge in the Tamar-Esk area but he omitted to tell the assembly where the stinking mud was reported to have come from; raw sewage that had been dumped into the yacht basin from the Margaret Street sewer canal and other sewerage outlets along the stormwater. Perhaps the high organic nutrient levels in the mud sludge could have been responsible for the smell as the sludge appeared at low tide.

Raw sewage has been dumped into the Tamar-North Esk estuary for approximately 100 years since settlement or longer than that. Dumping of waste materials in the North Esk and ultimately the Tamar Estuary was prevalent in the past from breweries, butter factories, Killafaddy Abattoirs, owned by the LCC, tanneries, small goods and manufacturing, and timber mills along the North Esk tidal zone.

I, myself, in the late 1950s witnessed huge amounts of effluent emanating from these industries in the North Esk; effluent such as manure, fat, offal waste, all foaming the river and large rats proliferating along the bank.

Also, the river was teeming with large eels in the slimy mess. The PLA do have photos of the drainage into the North Esk right up to St Leonards. Also draining their waste into the Tamar at North Esk were two large woollen mills, Kelsall and Kemp, and Paton and Board as well as the Rhapsody tyre factory, later to become Smith's Felt and Wool Work. Also in early times the Mount Bischoff tin mine in the Canal Street area is another possible cause of silt build-up in the upper Tamar Estuary, along with land clearing for settlement and farming. Early floods, especially 1929, would have had a major impact on siltation in the Tamar Estuary and tin mining in and around the South Esk catchment, along with goldmining at Royal George, Mangana, Mathinna and coalmining, could have added to the mud, sludge and silt in the Tamar.

In more recent times phosphorous silt coming down from Mother Cummings Peak, coming down the Meander River and into the South Esk, thus into the Tamar, also contributed to the silt problem in the Tamar River.

During a long association and many discussions with PLA staff, I have learned of correspondence between the PLA and the council going back many years concerning the amount of raw sewage, stormwater, et cetera, entering the Tamar River.

Some years ago the PLA set up a working scale model at Kings Wharf in the old timber sheds 1 and 2. This model showed the practice of raking mud and silt at a time of high flow or flood. Also dump barges to remove the soil from the dredging operation in the upper estuary taken down the river to Windermere, Gravelly Beach and the Swan Bay area was not effective because the mud would return to Launceston in time. It was a fact that tug crews would joke that the mud would be back in Launceston before the barge and tug were because the strong incoming tide was 2-and-a-half knots faster than the outgoing one. Thus it is obvious that we cannot rely on flood waters to assist removing the silt down the river because the tide will return the mud in a very short time.

What is needed is sufficient funding for a large-capacity dredge capable of removing 500 to 1 000 cubic metres per hour and the same period to discharge the silt and mud to allow the silt to dry out so it can be used for landfill, et cetera. What is not needed at this time is another report, costed at \$325 000, for a further study to be done. Money needs to be redirected urgently for dredging and not another study.

**CHAIR** - Thanks very much, Ross. I think that study has been undertaken; is that the GHD study?

**Mr BROOMHALL** - Yes.

**Mr WING** - What would you do with the silt that you take out, in the way proposed in the last two or three paragraphs of your submission?

**Mr BROOMHALL** - How would I take it out?

**Mr WING** - What would you do with it once you got it out?

**Mr BROOMHALL** - Well, you'd have to find somewhere to dispose of it.

**Mr WING** - Do you have any ideas about that on an economical basis?

**Mr BROOMHALL** - Yes. It could be pumped further down the river and used as landfill. Tamar Island wetlands could be extended out to where the natural channel is now at Cormiston Creek. The rice grass would then take over and the higher you have actually got the mud in the tidal area, the rice grass would probably die off eventually and the native grasses would then take over. Also talk to adjacent landowners about the disposing of the mud et cetera, provided it is tested and it is all fairly clean, with not too much heavy metals in it, but the bigger the dredge, the more mud you can move an hour the cheaper per cubic metre it becomes. It is as simple as that and it needs to be electric so the costs come down and you are not creating greenhouse gas.

So you need a permanent pipeline at least some distance along the bank of the river which is maintained by whoever the body is that oversees it. But you are not going to get any decent gear unless there is big money put on the table initially and I think you probably need \$5 million up on the table for dredging only, to get somebody to actually produce the gear that is going to remove the mud.

What has been happening recently is really there is not enough being removed to counteract what is coming in on the tide, and the dredging equipment that is around now I am sorry is only a toy. The old Corong did a better job. The previous one, Rankmore's, was even up to 350 cubic metres an hour, so it makes a lot of difference. The more you can move at a lower cost the more efficient you are.

**CHAIR** - I was wondering what sort of importance, Ross, you would place on the aesthetic look of the river.

**Mr BROOMHALL** - Quite a bit actually because a lot of people used to come to Launceston from Victoria and New South Wales in the summertime and sail down here. You don't see them anymore because there is nowhere really to berth and it just looks shocking really when the tide is going out. Actually low tide yesterday was very low and you could really see what was happening.

It is going to be a big job and it will have to have a million dollars a year thrown at it from then on to keep that machinery here or for someone locally to build it and put it together, or whether the new body owns the equipment and leases it out to the operator. That is one way of doing it.

**Mr WING** - When you refer to the new body, what would like to see in relation to that and why?

**Mr BROOMHALL** - I think it needs to be completely stand on its own, have no input from the city council other than someone there to represent it, and it should apply for money itself and then do the work. I think the biggest problem we have is that we have an environmental issue. We need to talk to the environmentals and say how the river was.

The wetlands we have now are man-made because the main channel used to be on the western side of Tamar Island, not on the eastern side, so that was blocked. That has filled up with mud on its own but I would say at least three-quarters of the mud that is in the river is man-made. There were mud banks there before. I have been reading some of the

old stuff from Paterson from 1803 and he commented on the fact that the mouth of the North Esk had a loch run across it or a wall and at high water there were 12 feet of water above it but on the other side it was deep water, it would hold a ship of 500 tons or more, and they sailed and rode from here to Ritchies, so a lot has changed since then and that is past the picnic ground at St Leonards.

The other thing which needs to be looked at is a silt retention pond, a broad pond built somewhere between Station Road and Corra Linn to slow down the North Esk when it is in flood to give time for that silt to settle out. I don't know if any of you have been up around Roses Tier, around the catchment of the North Esk and had a look for yourselves.

**Mr DEAN** - I have but some of the councillors have not.

**Mr BROOMHALL** - Well, I suggest you all go and have a look because no farmer would plough vertically up and down these steep hills and plant trees with no ground cover. Along Burns Creek all that is all going to wind up down here for sure so that is one thing that has to be looked at. They have to change their practice, and I have a heap of photos.

**Mr DICK** - Ross, I hear what you say and you are right but isn't it just too much to put that on an authority that is interested in alleviating the problem in the City of Launceston and not in its catchment areas? Regarding the administration of farming and forestry and so on so this authority shouldn't have anything to do with that. That, I think, is what happened the other day and it was a classic example of why we shouldn't go down that path with this authority we're talking about, if it was ever formed, because we start interfering in too many areas and straightaway you have the farmers and graziers opposing this new body, fearing that it would be given the power to interfere with forestry and farming and it shouldn't be; I agree with them. Its terms of reference should be very closely monitored and only used for the purpose it was formed, not to become another authority over people and their properties and the practices that happen; only be concerned with the river and if they identify any potential problems or any problem areas then those should be taken forward to the appropriate authority, not handled by them so that they can hand it over to State Parliament or to council and bring it to their attention by a proper way of doing it.

Remember me saying earlier on about how we started off on a meeting about Home Reach and the City of Launceston and how someone tried to build a boardwalk at Rossarden before we finished the meeting? You see how easy it is, if you don't have the proper terms, for it to go all over the place?

Ross is exactly right in what he says. All of these things are of concern and they all contribute, I believe, to siltation but all of them can't be tackled by this new authority, if it was formed. They can only be the carrier to say -

**Mr BROOMHALL** - Could they have the power to make a recommendation?

**Mr DICK** - They would have that, being an authority.

**Mr WING** - There is quite a body of opinion that the new authority should have the power to deal with these things and Les, you disagree with that. Ross, what's your preference?

**Mr BROOMHALL** - I can see where Les is coming from but it needs to have some mechanism where it could actually move forward and ask that question, why is this happening, and we need to change the way we do things.

**Mr WING** - Notwithstanding what Les says, do you favour a new authority having power to deal with matters such as that?

**Mr BROOMHALL** - Well, you have such a big catchment area, why shouldn't it have control over where the water comes from, right to what's put into the river, really?

**Mr DICK** - But can you imagine -

**Mr BROOMHALL** - I know, yes.

**Mr DICK** - the Lands department, Forestry and everyone else conceding power to another authority? Do you think it would ever happen while we're alive?

**Mr BROOMHALL** - Well, we're in modern times; things should go that way because what's the point of getting government money just to remove the silt without fixing the original problem?

**Mr WING** - The source of it.

**Mr BROOMHALL** - Yes.

**Mr DICK** - I reckon that'd come. At the moment, in my view, what Ross says is right but it's all guess work; you can't nail it down to saying, 'Look, there's 10 000 or 20 000 cubic metres coming from the forestry activity in the north-east consisting of the present forestry activities. on the Roses Tier there's  $x$  amount'. It's never been done, you see, and it's too big for a committee involved in the eradication of silt and a dredging operation. Maybe later down the track when the committee says to the Parliament and Federal Government, 'We've spent all your money, we now have it under control; you've got a plan now which says that in every second or third year we need to issue a contract to do  $x$ ,  $x$ ,  $x$  to maintain what we've achieved'. Then they might say, 'We now need to look at the source, at where it's coming from'.

I alluded to what Ross was saying about the East Tamar Highway not having a silt retention plan for the whole highway, that I am aware of. I am sure they haven't because they wouldn't be digging the drains and just letting it run off; they'd be making sure that they do contain all the run-off. I suggest thousands and thousands of metres would be disturbed and we're just lucky that we're in a situation where we've had a dry but if we did get a continued amount of rain while that work went on then we'd find there'd be a lot of stuff come out of it and as the work progresses up to where your black spots are - Windermere - you would find that all of that's going to go into the river and all of it is going to come back to Launceston.

**CHAIR** - Thank you, Les. If I could come back to you, Ross. What impact do you think that the Ti Tree Bend, through its treatment works, has on the silt contamination in the river?

**Mr BROOMHALL** - A lot.

**CHAIR** - Please elaborate.

**Mr BROOMHALL** - Well you know they release it partially through the water. You only have to be down there at night when it has gone, you know exactly what is happening and you see the scum on the river. The plant is not big enough. Or should the outflow from there be pumped further down the river to where it is salty? But it is still going to create problems that come back. Grey water should not be going into the river.

**CHAIR** - What changes have you seen there?

**Mr BROOMHALL** - Lots. Some days you have a soapy, scummy horrible mess on top of the water. That is the only place it can come from.

**CHAIR** - Is that from detergents and -

**Mr BROOMHALL** - Yes, it is the only place it can come from. There or up in the North Esk, but normally you can see it coming out the river. Sometimes I am working there at midnight and I know that as soon as they have cracked the valve or opened it up more, that is where it has come from. They may deny it but they need the money to lift the quality of that plant up.

**Mr WING** - I think for the purpose of the record it should be noted that you have a business that is based on Kings Wharf.

**Mr BROOMHALL** - Yes, on Kings Wharf..

**CHAIR** - You have been there how long?

**Mr BROOMHALL** - I have been there in that shed since 1984. I have worked there since about 1969.

**CHAIR** - Has the treatment plant been installed during that time?

**Mr BROOMHALL** - Yes. It has been installed and upgraded.

**CHAIR** - So you would have noticed a difference between when it was not there and when it was.

**Mr BROOMHALL** - Oh it was worse before, I must admit, before they actually did it.

**Mr DICK** - We had untreated waste in the water then but now we don't.

**Mr BROOMHALL** - It is partially treated, yes.

**Mr DICK** - It can only be said that it is on a very very rare occasion that you would see anything in the river, you know, any human waste or anything in the river and that.

**Mr BROOMHALL** - It is grey.

**Mr DICK** - It is extremely hard for the Launceston City Council to completely eliminate that from happening and I think that probably we should accept that in times when there are mechanical failures of their structure and so on it has to be acceptable, and it would be acceptable anywhere else, until they come up to speed with having enough capacity to isolate the whole of the city from anything going into the river, which is years away. Overall, in the whole catchment we are talking about in Launceston, Tamar Island down to Rosevears, I don't think the sewerage plant has any great effect -

**Mr BROOMHALL** - No, no, it doesn't really.

It's grey water.

**Mr DICK** - Yes.

**Mr WING** - Ross, in the build-up of silt at the wharf area, and you have pointed that out -

**Mr BROOMHALL** - It is just compounding. It gets worse every day, with the incoming tide.

**Mr WING** - We've heard Les's views on the narrowing of the channel. What do you attribute that to in the main?

**Mr BROOMHALL** - The mud?

**Mr WING** - The build-up that has occurred.

**Mr BROOMHALL** - That build-up is from bad dredging practices in the past. Quite a large quantity of it would be the dumping it down the river even as far as Swan Bay. Of course since settlement we have really been using the Tamar as a tip. Even during the war and up until the 60s the PLA was still dumping stuff further down the river from some of the plants in Launceston, at Swan Bay. We need now to turn around and look after it and love it and put it back to somewhere where it was when Paterson sailed up here. He only referred to it as a few mud banks and the rest was clean sand.

**Mr DICK** - Briefly, this is a conflict of thinking which I was talking about in as much as I believe that no silt comes back up once it goes past the shelf at Rosevears. I formed that view after talking with the people from Germany and when I was the chairman and I still believe today that it does not come back up the river from further down. It continues on to the sea but a simple radioactive silt test would eliminate that thought immediately for very little money..

**CHAIR** - Or give you proof.

**Mr DICK** - And give you proof that it does happen.

**CHAIR** - In your practices, Les, did you ever take silt from the Tamar Basin and put it beyond that shelf?

**Mr DICK** - No, but the Port of Launceston Authority did; it took hundreds of thousands of cubic metres down into what we call Spring Bay - not Swan Bay; past Swan Bay, just



inside the Batman Bridge on the topside. That silt is still there today; if you go over into that bay, into the middle of it, you'll run aground. That is still marked on the map as foul ground and it used to be one of the dumping areas. Probably the mistake they made there, if they made a mistake - I don't think they did; they took it all down there in the big barges they used to have - was that they didn't dump it in the main stream; they took it somewhat out of the main stream and put it in calm water and used it as just a foul dumping ground whereas probably it should have been introduced into the main stream, at the Batman Bridge or somewhere and then it would have been picked up and transported by the tide.

**CHAIR** - Do you think out to sea or would it collect in bays?

**Mr DICK** - We believe it would go out to sea. I am convinced that all the silt that gets past Rosevears doesn't return; it actually goes out to sea.

**Mr WING** - So what do you think of that, Ross?

**Mr BROOMHALL** - Yes, that's about right. There would be records of Bell Bay too to show that the island opposite the wharf there; that the bank, even if my lifetime living at George Town, actually grew in height. That was sort of a grey, whitish sand that was deposited there and didn't move from there. It actually rose vertically. You would notice down from Rosevears where Les was mentioning, that the banks are moving away and the mud's actually coming out of the rice grass and there are rocks and stuff appearing and there was a lot of garbage, I think, last time I went down and had a look. That mud is being transported this way.

**Mr DICK** - Another thing that hasn't been addressed in any of this is the change in river traffic over the last 10 years.

**Mr BROOMHALL** - Yes.

**Mr DICK** - I believe that the current traffic that uses the river has changed and it sets up a huge bow wave and stern wave just with the type of craft, yet there's been no attempt to get them to adhere to a slow-down policy on the incoming tide; they can go as fast as they like on the way out. That has accelerated the march of silt back into Launceston because we are now receiving the wash of these tourist boats that we didn't get before. Displacement hulls simply don't do that; the wash is nothing compared to the boats that are going up and down there now. There are factors why the silt has increased and the further out it comes, the faster it will build up.

**Mr WING** - So tourist boats have the wash and it dislodges the silt from the banks?

**Mr DICK** - Yes. Just go down to the highway and walk there when the boat's coming past and you'll see the wave comes in and breaks. Seven come in behind the boat; each one is just like putting a big furrow there and it drops it into the channel and on it marches into the town with the tide.

**Mr WING** - Should there be some speed limit such as applies to the Gordon River now?

**Mr DICK** - Yes. That's exactly why they did it on the Gordon River; to arrest erosion. They arrest erosion and they don't have a siltation problem or the degradation of the bank, the shore and the vegetation. All of these are management things that we're talking about now, I suppose, but it won't happen unless we've got a properly formed authority to oversee them.

**Mr DEAN** - Currently there are multiple agencies with some requirement and responsibility for the river, agencies such as MAST, Parks and Wildlife, DPIW, RPDC, Fisheries, NRM North, Tamar NRM and the list goes on. I think you're both in agreement that we should have that one controlling authority to take over those responsibilities -

**Mr BROOMHALL** - Within this area.

**Mr DEAN** - and to be answerable, responsible for and so on, except that Les is saying that they ought not have anything to do with the outlying areas where there's silt in the catchment areas.

**CHAIR** - Would you like to make a comment on that, Ross, and wrap it up, please?

**Mr BROOMHALL** - That seems to be about the way to go, I think, a body just to look after the tidal area of the Tamar and the North Esk.

**Mr WING** - And not the catchment areas?

**Mr BROOMHALL** - It needs to have some mechanism where it can demand either a study or something into the catchment. There are a lot of councils involved in this too. They all should be responsible for their little bit too.

The other problem we have is Launceston's water comes from the North Esk and its catchment, the majority of it. It is pretty dry up there now so there is a lot of water that we are not going to have in the future because of, shall I say, global warming which is a problem but the river definitely needs to be cleaned up and made useable and user friendly and encourage people to sail their yachts there like they used to.

**Mr WING** - It will be a while before we can ever Head of the River rowing on it.

**Mr BROOMHALL** - Yes. I have some photos from 1875 of the Tamar Slipway with sailing boats up on the bank, on a white sandy bank alongside the old highway right where the rowing club is. We have mucked it up. You don't have the area in front of the mouth of the North Esk and the South Esk where we had that big swamp and flood plain plus all that where Invermay is built. We have taken nature's catchment away to catch the silt.

**CHAIR** - Ross, thanks, I think we might need to conclude there.

**Mr BROOMHALL** - You didn't want to ask me about that wall over there?

*Laughter.*

**Mr WING** - What are your views on that?

**Mr BROOMHALL** - It is built back to front.

If anybody knew anything about farming and fencing, if you have a steep strainer like that and a vertical it can only go like that with pressure at the bottom; it will go straight up and out. If you wish to check that I said it would fall over before it was started, check with Kim Booth, Ken Sands -

**CHAIR** - I am pretty unsuccessful in wrapping this up, don't you think?

Ross, thanks very much for your time and your submission and thank you very much, Les, as well.

**THE WITNESSES WITHDREW.**

**Mr JAMES McKEE AND Mr RICHARD IRELAND, NATURAL RESOURCE MANAGEMENT NORTH, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.**

**CHAIR** (Mr Finch) - Gentlemen, thanks very much for taking the time to submit to our committee. You understand the terms of reference and I would like to invite you to make comment as you will in respect of it, probably talk about the organisation that you are representing and submit as you care to and then we will ask questions.

I must point out that we are a little bit limited for time - probably 20 minutes.

**Mr McKEE** - We will keep our presentation short and then take questions.

**CHAIR** - Thank you.

**Mr McKEE** -NRM North is, as you are aware, a statutory body under the Natural Resource Management Act and our key roles under that act are, or two of the most relevant, to facilitate the integration of natural resource management and planning activities for the region and to coordinate the region's participation in national and State programs relating to natural resource management. It is under particularly those two key roles that the Tamar Estuary and Esk River program was put together as a means of bringing together bodies that have statutory and non-statutory responsibility for various aspects both within the estuary or attached to the estuary and backup in the catchments as well.

That role was reinforced, for both NRM North and the reason we developed the TEER program, at the division workshop - and some of you were there - which really identified quite clearly that there was a need to bring together some form of integration and cooperation of the various bodies and people who have responsibility whether statutory responsibilities or other voluntary responsibilities for looking after the system that is ours.

The other key role that I read out was about coordinating our participation in national-State programs and so one of the key things that NRM North has been doing is seeking investment into the Tamar Estuary and the catchment with a particular eye on the health of the catchment and that includes obviously issues such as siltation.

Our submission was more about trying to make clear the role that NRM North as an organisation has to play and I think it is worth saying that certainly we see the Tamar Estuary and Esk River program as our first preference for trying to voluntarily bring together cooperation of people responsible for the management of the estuary and also in the catchment itself, primarily because that is what we are about. We are not about regulatory arrangements, that is not our role, but we also sincerely believe that voluntary approaches are the best way to do it in the first instance and that is just our position. I probably do not need to say anything more at this stage.

**CHAIR** - Would you like to make a comment, Richard, at this stage?

**Mr IRELAND** - No, not at this stage.

**CHAIR** - If we could talk about the recent round of funding that has been made available to NRM's throughout Australia, how has your organisation fared?

**Mr McKEE** - We have done not too badly. We receive \$2.02 million per year for the next four years. That is our base funding and then we obviously compete with the rest of Australia for more funding. We also receive State Government funding for our core operations. While we fared reasonably well, that is certainly down on previous years.

That funding is quite directed as to what we are allowed to do with it but certainly with that, one of our key activities we will be looking at is once the studies are completed which coordinate Launceston City Council as to where the silt is coming from in the estuary, so we are expecting that to be June/July, we will be investing, I can't give you a figure but we will certainly be investing some of that backup into the catchments, assuming that that is where some of the silt is coming from and some actually within the estuary itself.

**CHAIR** - Is that the GHD report that you were referring to?

**Mr McKEE** - GHD and then there is the sort of sister report which is NRM North's report which is actually by WBM and Hydo Tasmania as a consortium.

**CHAIR** - Where is that in respect to its completion?

**Mr McKEE** - We are expecting both of them to be completed in June/July, somewhere around there.

**CHAIR** - One is already completed, isn't it?

**Mr DEAN** - GHD have done an assessment at this stage of certain issues and that has been produced to council.

**Mr WING** - Do you have a copy of the GHD assessment?

**Mr McKEE** - It has not been finally released yet, I think, to the public.

**Mr WING** - So you do not have the same document that council has?

**Mr McKEE** - We don't have a copy of it yet because it has not been formally released.

**CHAIR** - Regarding that funding that you received, what comparison was made with what you previously received or could you make a comparison?

**Mr McKEE** - Sure. Three-and-a-half years ago, call it three years ago, we were receiving about \$3.7 million a year. That was a combination of State and Federal funding. We are down to \$2.5 million now. It is combined funding - State and Federal.

**CHAIR** - That is quite a drop, isn't it?

**Mr McKEE** - Yes.

**CHAIR** - Will that affect the TEER program in any way?

**Mr McKEE** - No, because the TEER program was actually developed under the lower regime of funding. Obviously if we had more money we would be able to put more into it but the bottom line is, part of our key focus as NRM North remains the catchment activity and that would have happened regardless of the TEER program being in existence or otherwise so it just means we have a sharper focus on what we do back in the catchment and that is about water quality and with a particular focus on where we find some of those areas of potential siltation occurring in the catchment.

**CHAIR** - You talked about trying to attract investment into the operations of NRM. Have you had any success?

**Mr McKEE** - Certainly. The TEER program itself has been a success in that all the local governments that are involved, as well as the State Government, have contributed cash into the program. We are going to have to go to Mr Garrett and propose a larger program for the Tamar Estuary/Esk River area and that's under consideration.

**CHAIR** - In respect of our terms of reference, do you think that there is a role for a statutory authority to play in the management of the Tamar Estuary and the catchment areas?

**Mr McKEE** - Possibly. Probably, to be honest, it is not as broad as some of the terms of reference are. I have indicated in the notice of motion, certainly in terms of infrastructure, that that is something that sits outside our purvey. Certainly the TEER has an interest in some of those things such as infrastructure around flood and that type of activity, which seems to be a bit of an issue, but in terms of some of the potential scope within this notice of motion, which is really about some of the upper catchment issues and even the environmental health of the estuary, we personally believe that in the first instance the voluntary approach is the best. We really haven't had an opportunity to let the TEER program develop into something and see if it actually works. We are firmly convinced it will but it hasn't that opportunity to mature properly yet. A statutory authority may have a role but we probably don't see it as being as broad as in this notice of motion.

**CHAIR** - Do you think that a statutory authority might strengthen the work of the TEER operation if it was there as a body to make its reference to - TEER, I mean - make a reference to the statutory authority and highlight the issues and solutions that they may see and then for the statutory authority to perhaps seek to achieve the results that TEER would hope for?

**Mr McKEE** - It's possible but it could also be counter-productive. It really depends on the scope of the authority, I think. One potential way in which it could actually be a negative is if an authority has power, say, back up in the catchment to mandate particular land management practices; you might get an outcome but it wouldn't necessarily be a pleasant outcome as far as land managers go who tend to respond better to a voluntary approach. Obviously, that's a different issue to the issue of infrastructure.

**Mr DEAN** - James, over the past years we have had umpteen dozen organisations with some responsibility for the river; there are heaps of them including local councils, MAST, Parks and Wildlife, DPIW, RPDC, Fisheries, NRM North, Tamar NRM and the list goes

on. People are saying that the siltation is worse. I just fail to see where a voluntary organisation would have any ability whatsoever to get the funding and to be able to take the actions and to get the support that is necessary to now really have a go at fixing this river. What's your comment on that? Do you wish to comment on that?

**Mr McKEE** - Probably not.

*Laughter.*

**Mr DEAN** - It just needs to be said because everybody has been having a go at it for years and years and nothing's happened, hence the reason for the establishment of this committee.

**Mr McKEE** - Sure. I'm a newbie in town so I have to be careful with what I say about the past but I think it's fair to say that the TEER program is the first time, really, that -

**Mr DEAN** - I forgot to say; consultant's report after consultant's report on the river as well.

**Mr McKEE** - Absolutely. I think it's fair to say that the TEER program is the first time that there's been a serious bringing together of the major players that have responsibility, and probably the first time that we have actually also pulled together all of those consultants' reports and started to get to the pointy end. The work that we have been doing has actually been not just new work but bringing together all that old work, which was the Tamar Estuaries Management Plan and which was the first step in that process. We already have commitment from local councils and Hydro Tasmania to actions within that Tamar estuaries management plan and that builds on a lot of that work that has been done in the past. I believe we are actually seeing a fairly serious bringing together and the start of voluntary action to address some of those issues.

It is not an easy road and I agree that in some ways it is easier to get action by having authority and being able to lay down the law. I guess all I can do is state again - and it comes from our philosophy as an organisation - that we drive for voluntary action and the bringing together of people in cooperation and collaboration. I believe we are seeing at least the beginnings of that properly happening.

**Mr WING** - It is obvious, is it not, that the silt in the Tamar needs to be dredged out in the main to overcome the problem?

**Mr IRELAND** - I do not think you can say that.

**Mr McKEE** - It probably comes again back to whom you listen to. Certainly, from an aesthetic point of view and from a recreational point of view, getting rid of the silt would in the short term require dredging, but from our perspective there is an issue about, firstly, whether that really is going to fix the problem or do you simply recreate an environment where the silt can just simply backfill again. Until we know where some of that silt is coming from, and hopefully by June or July we will have a fairly good idea, it is a bit premature for us to give an answer to that.

**Mr WING** - You question that, Richard, but do you question the fact that it could be necessary to have dredging to some extent to deal with the silt problem or do you say it can be solved without any dredging at all?

**Mr IRELAND** - I think the issue is that you need to know where the silt came from and what is going to happen if you start dredging as you might cause other problems. The whole thing has come about by natural causes - the lack of rain and so on - and we think it looks horrible but maybe silt is nice. It is just a perception that it does not look nice. We could probably get a huge dredger from Melbourne and start digging up the entire river but do we know what we are going to cause by doing that? Do we know where the silt came from? It is all being driven by a purely aesthetic this does not look nice thing, which is probably not what we should be really looking at.

**Mr WING** - It is not as if there has never been any dredging. We do know what will happen with dredging because it has happened for decades; it is not some novel idea.

**Mr IRELAND** - No.

**Mr WING** - Do you suggest that there should be no dredging in the future?

**Mr IRELAND** - I do not know because I think we need to look at the report that is coming in in June or July and really find out where the silt is coming from and why it is there before we start deciding what to do about it. We might just dig up a million tonnes of silt and another million tonnes comes in next year.

**Mr WING** - It may well be the case. Do you have any views about what should happen to the enormous build-up of silt now?

**Mr IRELAND** - No. I do not have any views about what should happen to it. My first argument is let us find out why it is there and is it feasible to do anything about it.

**Mr WING** - Whatever the research being undertaken reveals, do you agree that your body, notwithstanding very good research work that is being done and the coordination, has no power to take action to remedy or solve the current situation?

**Mr IRELAND** - We do not have any legislative power but, as James said, we work together with landowners and we feel the cooperative approach is the way to go.

**Mr McKEE** - Certainly dredging has a role. Our main concern is the scale at which that happens and, at the end of the day, that comes back to why you are doing it. Is it aesthetic or are there other issues? One key issues that is raised and which we have some concern about, and it is just coming out now, is that by disturbing a major amount of that silt in one hit there could be some potential issues. We know there are heavy metals in that silt and we know that there is a certain ecological function that is already established, particularly along some of the edges of that silt and it is quite well documented.

From our point of view, yes, maybe dredging does continue to have a role but the question is really at what scale and for what purpose.



**Mr WING** - I understand that. Would you go so far as to say dredging probably, not just maybe, that it is probable that there would need to be some dredging?

**Mr McKEE** - Probably, particularly in times like this where there is no natural flushing mechanism.

**Mr WING** - Notwithstanding the good work you are having done now, would you not feel it would be an advantage if you were, in addition, able to have the power to make decisions that could be implemented rather than relying on cooperation? Governments, notwithstanding the power they have, often try to get the cooperation of people in organisations but they would be hardly very successful if they did not have the power accompanying that. Would you not feel that you would be in a better position to deal with the problems in the Tamar if, in addition to the funding you have and the good research that is being done and attempts to get cooperation, you could be more successful if you had power?

**Mr McKEE** - It probably falls outside the purview of NRM North as an organisation simply because the act that we exist under will not allow us to have a regulatory function as it stands. We would be happy to have more persuasive power but certainly we are not looking for regulatory power.

**Mr WING** - Accepting that, do you agree that that limits your capacity to take all the necessary action that is likely to be required?

**Mr McKEE** - It may do.

**CHAIR** - Could I ask about priorities that NRM might have? We have talked a lot about the silt and we seem to be focused on that but I am wondering about the priorities that NRM might have in respect of the Tamar Estuary and the catchments.

**Mr McKEE** - Silt is certainly one of our key priorities but it unfortunately overshadows one of the other ones, the ecological health of the estuary which goes the whole length of the estuary. We are concerned with the ecological function even within the silt.

While we are not averse to taking out the silt, we need to think carefully before we do that, and we think we should, but there are other significant issues such as ecoli and health and human use of the river to think about. For example, we have been monitoring in Lake Trevallyn, in conjunction with our partners, and part of that is making sure that the E.coli levels there are safe and also that has an impact downstream in the estuary itself. We do test, and from a human health perspective, we are developing an ecological health monitoring program for the estuary itself. This is about to finish its first round and is really trying to set a benchmark for things like fish species, native birds and the condition of vegetation that exist either on the edges or in the estuary itself. We are doing the same thing in the catchments in the North Esk and South Esk, monitoring water quality. The key thing for us there is nutrient management because excess nutrient often can potentially cause some of the problems further downstream with sedimentation. When we know where some of those sources of both nutrients and sediments might be, one of our key priorities is to work at the edges of those waterways to create buffer zones. Farming practices within the landscape either side of the river systems remain fundamental to us as a priority It is an asset to have healthy soils and all

those things, and how people manage that land affects the estuary itself down here. Whilst we have some distinct priorities in the estuary and on the edges, our real focus is on prevention and not cure. A lot of that is about making sure that back up in the catchment we are managing to the best of our ability.

**Mr WING** - That will be a very interesting outcome because I think it is very appropriate what you are doing there.

**CHAIR** - Richard and James, thanks very much. I was wondering if there was something you would like to say in conclusion before you wrap up?

**Mr McKEE** - I will just emphasise again what our perspective is, obviously coming from NRM North's philosophical background, that a voluntary approach is the best and that is really what we are established to do, to bring people together to cooperate and collaborate. We are certainly giving the Tamar Estuary and Esk River program our very best shot, using it to our best ability to get investment into the Tamar and its estuary and the rivers and doing what we can to manage our great Tamar.

**Mr IRELAND** - I would agree with that. We succeed in doing a lot of things without the big stick. That is basically what we do. We have a lot of people outside who support what we do and we do not really go around having to tell people that they must do this and they must do that. There is a lot of goodwill in the community so that we are able to achieve without having to force people to do things. We do have that ability.

**CHAIR** - Richard, thanks very much and thanks very much, James.

**THE WITNESSES WITHDREW.**

**Mr ADRIAN HARDMAN WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.**

**CHAIR** (Mr Finch) - Adrian, thanks very much for being willing to submit to us today. I must point out that, unfortunately, we are limited with our time and Ivan has to get away and once he starts to look nervous and his eyeballs start to roll around in his head, we will need to draw to a conclusion.

Adrian, I am wondering if you would care to submit to us first and then we will ask you some questions, probably firstly about your involvement with the river.

**Mr HARDMAN** -I would like to say here that I do have two pecuniary interests here. I am the Assistant Secretary of the Tamar Yacht Club and also have been employed with Tamar River Cruises for eight years and had a lifetime of using this river. What I say here does not directly reflect on the opinions of the Tamar Yacht Club and Tamar River Cruises because those two organisations do not really express too much of an opinion, as such.

**CHAIR** - Okay, but you have been so moved to want to submit to our terms of reference or support the terms of reference?

**Mr HARDMAN** - Yes, absolutely, because I believe this river is a beautiful waterway. I have been in tourism all my life and this waterway is a main feature of tourism for the Tamar valley. If there was not a river up the valley there would not be the valley as we see it today.

**CHAIR** - What have you observed over the years?

**Mr HARDMAN** - Over the last two years particularly the rapid increase in a build-up of the silt around the upper Tamar reaches, particularly the yacht basin between Home Point and the entrance to the Cataract Gorge. The two gentleman who were here before me were asked the question as to where the silt is coming from, it has to be determined as to where it is coming from.

The bottom line is European occupation here for the last 200 years has caused most of it, although back in 1804 when the early settlers came up this river there were mud bars in various spots. For example, there was a horizontal fall off Royal Park out from where the launching ramp is. There was also another horizontal fall in the mouth of the North Esk River about directly adjacent to where the naval cadets shed is. There was also a mud bar across the river outside the Maritime College at Newnham and they had difficulties with those back then but they were removed.

The river itself has been changed by us. One cannot help but wonder whether the river is trying to repair the damage that we have done to it or whether it just cannot cope with what we have done to it over the last 200 years.

The silt in this river is basically a direct result of soil degradation with our farming practices and our forestry industries. While the two gentleman who were here before from NRM were saying that they were looking at prevention upstream in the upper

catchments, they were basically referring to farming practices but there was no mention of forestry.

Forestry is one of the worst inputs for soil degradation and silting in this river when you consider that both the north and the south Esk rivers originate in the forestry plantation areas around Ben Lomond and Mount Barrow. When you take a drive up in those areas and see what happens in those forestry plantations you can understand why we have so much silt in this river down here.

**CHAIR** - Is there not riparian protection, though, for those forestry practices to stop that silt from getting into the rivers?

**Mr HARDMAN** - In my observations of travelling around up there, and I do have a love of travelling up around there because one of my other interests is four-wheel driving, it does not appear to be. After heavy rain the run-off just comes down, takes the topsoil off with it and it is evident every time the Cataract Gorge floods.

**Mr DEAN** - There has been no rain over the last five years so how do we account for what has happened over the last five years?

**Mr HARDMAN** - The last decent flood that we had here was in September 2005. In my estimation and from what I have seen in my lifetime here, that would have been the biggest flood that we have had in the last 25 years. The last biggest one would have been in 1985 and I judged that by the water level in the first basin.

**Mr DEAN** - I think that you were saying there has been a considerable build-up of silt over the last couple of years -

**Mr HARDMAN** - The last two years particularly.

**Mr DEAN** - so with no floods and high-volume water coming in from the rivers, what is your position on that?

**Mr HARDMAN** - We are paying a price of malpractice and dredging operations over the last 150 years, whereby the Marine Board of Launceston dredged the silt out of this river all along Home Reach, dug it up with a bucket dredge, loaded it into barges and took it down to Rosevears and Dilston and dropped it down there because it would not settle there.

**Mr WING** - And it is being washed back up?

**Mr HARDMAN** - Yes, it has been coming back up the river. A lot of people here tend to believe that we need a flood to flush the top end of the Tamar but that is not going to fix the silting problem. Over the last three years or so the silt, especially off Home Point and Town Point, has compacted there so hard that when we did have that flood in September 2005 it didn't move anything. It washed the soft stuff off the top of it which would probably have only been a couple of inches thick.

**Mr DEAN** - We were given evidence earlier that obviously works with what you are saying, that the sun dries it out, it gets a crust and then more silt comes in on top of that.

**Mr HARDMAN** - It is just the weight of silt building up on it and it is a geological formation. A lot of sandstone is built up by compressing extra weight over the top of it and that silt put down there is getting quite hard. While the dredge can move it, floods can't.

**Mr DEAN** - Do you believe in all of this then that there ought to be one authority sitting there to take the responsibility for all of this or should we continue going with all of the authorities, and there are multiple authorities currently with some responsibility and accountability?

**Mr HARDMAN** - My honest belief here is that there should be one authority that oversees the whole thing. At the moment you have three levels of government and there might be other authorities that I don't know about. They have all got their fingers in the pie and there is a bit of handballing going on. No-one is prepared to put their best foot forward, put their money where their mouth is and look at doing something about it. It is not the Launceston City Council's problem as such. It just happens that it gets dumped in their backyard. This is a State issue. It is not a Launceston City Council matter.

**Mr DEAN** - I am pleased to hear you say that.

**CHAIR** - And a Federal issue as well.

**Mr HARDMAN** - Federal, definitely. We are all taxpayers. Taxpayers and associated businesses that pay tax have caused this problem over the last 200 years so we should be fixing it.

**CHAIR** - There are a couple of things I would like to ask you before we run out of time, Adrian. What sort of comments are you getting from the tourism aspect of the work that you do on the river and also the change of activities, if any, for the Tamar Yacht Club?

**Mr HARDMAN** - The bottom line at the moment is the yacht club does not hold any sailing that goes up this end of the river - very rarely now.

**CHAIR** - Used to?

**Mr HARDMAN** - Yes. We used to sail keelboats up this end of the river back in the 1980s. Now we can't sail keelboats up here any longer and due to the fact of the bacterial levels in the Tamar River at the moment, basically the dinghies are sailed down at Beauty Point. It is a more open waterway. We have better facilities down there now. We have been opening a new club house and it is just a better general venue, although as much as they would like to be able to hold sailing up here again and as far as the tourists are concerned, they look at it and most of them comment and say, 'How do you put up with this?'

**Mr DEAN** - Because you have been using the river so much, what is your position on Ti Tree Bend, the effluent that is released from Ti Tree Bend and the other inlets from the Margaret Street detention basin coming in? Do you believe that is adding to our problems as well?

**Mr HARDMAN** - The effluent treatment I should not think so because to my understanding the Launceston City Council has done substantial work there in cleaning up, what? A discharge into the water?

**Mr DEAN** - Yes.

**Mr HARDMAN** - But one of the concerns here is the stormwater that comes through the detention basin and any other stormwater drains around because that again brings sediment into the river. Run-off from roads - you get traffic - if you get a period of x number of months when there is no rain, vehicular traffic through the city, we get a sudden deluge of rain and there is all sorts of garbage that comes out of those stormwater drains - silt, leaf matter and all sorts of stuff.

**CHAIR** - Adrian, could I ask you about the proposition that was put to us earlier today that perhaps the commercial vessels like the one that you work on should be slowed down because the waves that they make are adding to the silt issue because it seems to be furrowing the sides of the river banks and loosening the silt and keeping it in suspension?

**Mr HARDMAN** - I would argue strongly against that, the simple reason being whoever said that has not been down the river when the incoming tide runs. Some vessels go up and down this river at speed, and I am not just referring to the one I work on, there are several that go up and down this river at speed, and Launceston is becoming a bit of a destination at the moment. We have four multimillion dollar, privately-owned power cruisers sitting in the marina. The regulations under the laws of navigating in waterways stipulate that any vessel that is within 60 metres of shoreline has to slow to 5 knots so that in itself regulates that, but once you get 60 metres away from a shoreline you can increase your speed.

**CHAIR** - So there is regulation already to govern what you do?

**Mr HARDMAN** - Yes. There are not too many places around except for possibly Ti Tree Bend where the channel runs extremely close to the bank of the river. On a tidal estuary like this one the water will always rush round the outside of the bend; it's a natural course for water to want to go straight ahead but it gets to the hard medium on the bank, it goes round the corner and scours out a deeper part of the channel right on the very corner, on the outside of the corner.

**Mr DEAN** - And in the other areas - at Dilston, isn't it - they slow down. Didn't MAST bring in something?

**Mr HARDMAN** - Yes, MAST issued a directive and they've put signs up there. It's not an enforceable law because they're further than 60 metres off the bank. They basically did that as a gesture of peacekeeping because the residents were complaining about so-called degradation of the shore. However, it's only because the rice grass is allowed to take off down there. The rice grass was introduced in, I believe, the 1940s for what they call the boat channel, which is the area between Newnham Creek and Tamar Island, as an experiment by the Marine Board of Launceston to contain the silt on the river banks. It failed because it won't grow in freshwater, and back then it was all freshwater down towards Tamar Island. That rice grass has been spread downstream. Now, I know there are government departments that have reports on this and I've seen one only two days

ago. Unfortunately I wasn't able to get a copy of it to bring here; the Department of Environment - they have concerns about the rice grass on the banks of this river further downstream and it's building the mud up on what were once beautiful beaches. Gravelly Beach, Native Point and Dilston have huge issues with it. Today the fast-moving vessels going up and down this river could well be helping because they are washing the mud out of the rice grass, the rice grass disappears and the nice pebbly shores are revealed again.

**Mr DEAN** - Where's that?

**Mr HARDMAN** - In Dilston, just around the bend before the Rostella homestead; just east of the Rostella homestead.

**CHAIR** - I've heard it is happening at Gravelly Beach as well.

**Mr HARDMAN** - Yes. Just to the east of Rostella homestead there's a nice gravelly beach starting to appear there at the moment because it's exposed to high tide.

**CHAIR** - Adrian, we just might need to conclude. Would you like to make some comments in conclusion?

**Mr HARDMAN** - Yes, there needs to be one body that overlooks the whole management of the Tamar and is funded by the State and Federal governments. They do have a role to play with a public consultation process, as this committee is here. Something definitely needs to be done. One of the things I will mention here is the silting dredging contract; they're not sure whether they are going to be able to continue too much longer because they have a problem with drying the silt. There is one gentleman in this town that I know of, and I am very good friends with him, who has developed a far superior drying process for the silt in this river, but it was overlooked at the last dredging contract because it was slightly more expensive.

**Mr WING** - Would you like to see this authority have jurisdiction over the silt catchment areas?

**Mr HARDMAN** - Absolutely. Definitely something needs to be done with this river. It's 200 years of European settlement that's caused the problem and we're left to fix it now before it's too late; before Launceston becomes the city that you cannot access by water.

**CHAIR** - Adrian, a good point to conclude on, and thanks very much for taking the time. It's just unfortunate that we didn't have half a day to spend with you but we appreciate your coming in.

**Mr HARDMAN** - Well, I'm open to anyone who wants to come and talk with me, even if you want to come and have a look at it yourself.

**Mr DEAN** - Mr Chairman, if Adrian has more information maybe he could put it in writing for us, if there's an opportunity.

**CHAIR** - Could we have your mobile number, Adrian?

**Mr HARDMAN** - Yes. If the committee wants to go down the river and have a look for themselves I am sure I could organise that through Tamar River Cruises.

**Mr WING** - It's good that you've had the practical interest in this Adrian. You, together with Ross, have very practical knowledge of Launceston, and very similar views.

**CHAIR** - If I could please, I would like to adjourn the meeting -

**Mr WING** - Yes, I thought we were off the record.

**CHAIR** - until 17 March in Hobart. Thank you very much.

**THE WITNESS WITHDREW.**