

DESALINATION PLANT NUMBER 2
BINNINGUP COMMUNITY MEETING – 29 MAY 2007
7.30pm, BINNINGUP COUNTRY CLUB
PART 2 QUESTIONS AND ANSWERS

Greg Elliot:

We can take as many questions as we have got time for, so I am just going to start up the back and work my way around the room. Please speak in a big loud voice, we would like to get a mike near you but I don't think we can.

Cameron Black

I guess that we have all come here with an opinion and first of all I would like to say that I am 100% in support of a desal plant but what I don't like is that you can get up there and belittle us and say we want your input as a community but the decision has already been made to have it here. You would have a hell of lot more respect from the community if you had decided to have three sites, go around and consult the community, these are the sites we are looking at, what are your views? Get public opinion before the decision has been made.

Applause

Greg Elliot

Are you looking for a response to that, or are you making a statement?

We can get a response to it if you want, but I might keep moving around the room. The lady sitting next to

Lady

Yes, you said the picture we saw is of Desal 1 the main building is the size of a Bunnings Warehouse, but now you are saying its double that, so are we looking at two Bunnings Warehouses now?

Nick Churchill

Yes, that was 45 gegalitres, so ultimately capacity we would have to look at how we fit on two of those buildings.

Lady

I went up onto the sand dunes, I stayed at road level and just stepped out of my car at the end of the road and I looked across towards Binningup, I didn't have to go up onto the high sand dune to see the water tower, but I could also clearly see houses, that's how close it is and I also wonder how the Council allows that development if this was in the background.

Nick Churchill

I can't answer that, but I guess the visual thing is one of the crucial things we are hearing here.

Man

I am a landowner adjoining the southside of that land under Town Planning Scheme No. 13, we are going urban, it is in the plan, there is nothing else required, it is in the plan, that is what is going to happen.

We are in the position of having houses going right down the boundary. When you took the land from us there was an agreement that the land was going to be 38 hectares which included all the buffer zones, you took the land off us, you paid us for it, not much, but you paid us something for it, and then you put in a buffer zone on the other side of it. So, I have got to tell you that I am fairly skeptical about what we are talking about tonight because I know our position and I know it doesn't fit with what you guys are doing.

Chris Elliott

The issues you are raising we are going to have to work through with you, but we have checked the status and it is a Town Planning Scheme, but the waste water treatment site that you correctly point out there was set up 20 years ago, it has been reflected with its 500 metre buffer zone in the Bunbury Regional Plan since 1995 and it is also featuring in the current Structure Plan that the Planning Commission are shortly to release, so we need to work through these planning issues and the Shire position in relation to their position within the Structure Plan. We have got a live waste water treatment plant there, there is a buffer issue around it we have to deal with, so we would like to work with landowners such as yourself.

Man

.....every time the Government is taking a bit more and a bit more, so therefore I am very suspicious about what we are talking about here tonight. I don't know if desalination plants work or not, but it just seems crazy to

Chris Elliott

We will research the issues around the original purchase.

Lady

Interjections

We did the research before we bought the property – if you owned something here, but none of you do, do you?

Greg Elliot

The people who are before you tonight are not the political decision makers, you can certainly register your outrage or your extreme concern to these people, but these people have a job to do and that job is to deliver a plan. You can express your concerns in the best way you can and they will all be recorded and certainly the issues to do with the schemes and town planning will all be addressed and sure we need to hear all of this stuff, but if we can take some questions that perhaps might relate to the plant itself, issues to do with what it might look like, how its going to operate, and all of that sort of thing – the lady in blue there if I could thank you.

Lady in Blue

This is related. There seems to be a disparity between your offer of community consultation and words that have been used are that Desal 2 is going forward, it has been approved on the basis of the location and the decision has been taken. Can you tell us how we as a community can have an input that could possibly make a difference to this decision that has already been made.

Interjections

Greg Elliot

If we could outline the process for you. The process and the process by which you can have genuine input can certainly be spelled out for you.

David Luketina

Unlike the waste water plan there will be a formal process for this through the Environmental Protection Authority which makes a recommendation to the Minister for Environment. So apart from the consultation that we will do you will have formal processes there. They will require us to answer everything that is put in and that all of our answers we will be held accountable for, so you can rest assured that apart from anything we do the EPA will require that process.

Lady

What about the economic impact, the environmental impact obviously is essential, but what about the economic impact on those of us who own homes in this region?

Chris Elliott

David has outlined the formal environmental process and just emphasizing to everybody, yes, just answering the lady's question, the Premier has outlined the project but it does not have formal approval, we must follow the processes and they are rigorous. From a consultation point of view, what we are dealing with is the Premier has said there is a site there, presented as the best site available currently in the assessments that have been made and the request the project team are seeking to implement is to establish whether the desalination plant of the Water Corporation can be built on that site. But beyond that, we want to consult on every aspect of that. From a sustainability point of view we want to cover the social, economic and environmental issues that are associated with that proposal. Beyond the plant itself there is a lot of opportunity to have very genuine detailed consultation about how do we get the price and those other things. There is a genuine room there for the community and the Shire and others to locate the infrastructure.

With the buffer it is a very important issue. The point I want to make is, there is an existing waste water treatment plant and infrastructure there, it is vital to Binningup. Binningup can't grow, if you don't have a sewerage system you can't go forward, so that is there now, we must recognise that and deal with it.

The proposal is to actually establish the desalination plant on the actual waste water treatment plant, so the impacts if the site itself will have it, will be less than what the waste water is. There is a possibility when we review our waste water planning, and the possibility does exist that the waste water may have to be relocated and therefore the total impact may change.

The buffer zone for the desalination plant won't extend beyond the land that the Corporation will own. The circle showing the buffer extending around the land is relating to waste water, that is the current status. The desalination plant buffer zone will require a footprint of about 20 hectares, our land is 40 hectare.

Lady

You just contradicted yourself.

Chris Elliott

No. That is consistent.

Greg Elliot

We will try and re-state it so we can get it clear. So, the Water Corporation owns a piece of land that is 40 hectares.

Man

You said you owned the land to the high water mark. There is a public reserve that is part of your block which you have not told this crowd about.

Greg Elliot

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Let's try and bear with us folks.

Nick Churchill

Our lot does not extend to the beach. It is clearly a coastal reserve.

Man

You said it extended all the way down to the water line. While I am speaking, there is an unresolved south west Noongah Native Title claim over all land which is not privately owned in this Shire, including the sea. So maybe you want to address that too.

Nick Churchill

Absolutely that will be addressed through the project. At this early stage those issues have not been gone into in detail. It is clear that has to be dealt with.

Greg Elliot

All of these issues we need to make sure they are at least highlighted if we are to get proper answer to them. If there is any confusion and it sounds like there are some sort of discrepancies between the way these questions are answered, we must try and get them nailed completely. So, we will just try and get it right and if we don't get it right tonight then we will just keep coming back until we do get it right.

The lady in black there.

Lady in Black

My question is actually on the noise issue you have raised on the actual plant and the operation of it. You said that you will minimize the noise, well I for one go to sleep at night listening to the ocean rolling in on our beach, so how is that going to impact if your plant which for most of us is less than a kilometre away after you take out – I mean your kilometre from Taranto Road, using cadastral maps. It is less than a kilometre away from the town, so by the time you built your desalination plant which I imagine is going to come within about 400 – 500 metres of our town already, so how is that noise going to impact on the residents who are already here and who have paid a lot of money for their homes.

Greg Elliot

Issues of distance and so forth but we have got to get that 100% right. People are saying that it is about this or about that, but we need to get it right. But the question is about noise.

Lady in Black

Taranto Road is a kilometre from the end of our town on that map. We have been working it out, if it, so Taranto Road itself, so you are talking about the land that you own which is the Binningup side of Taranto Road and that it is going to come within 400 – 600 metres of the existing townsite.

Greg Elliot

OK – but the question is about noise, so if I can perhaps get someone to speak to you about how much noise these plants make and whether it will be an audible noise in the middle of the night. Is that the sort of question you are putting?

So, if you deal with the noise question, have we got someone who can speak about the noise that these plants make?

Nick Churchill

I guess noise is one of the key things we are going to have to start doing studies on. We operate plants across the road from houses. Noise is a manageable issue and we will be doing whatever we have to

do to meet the regulations and meeting the requirements so that you are not impacted by adjoining noise.

Lady

You have also got farmers and landowners who have got land that falls between Myalup and Binningup. What about the people who fall within a couple of hundred metres of where your site is going to be? How is it going to impact on them? These are the things we need answers to.

Nick Churchill

You are the key stakeholders within that distance, definitely in noise, wastewater as I said, visual amenities, you don't want to see a shed every time you go out for a beer on the verandah. These are the things we take very seriously and to handle the noise well or to abate it well, we have to start with what is out there at the moment. So, straight away we have to be putting up a study so we can measure the noise of the ocean or the traffic on the road.

Greg Elliot

Nick, one of the things that has been offered by John Wallis is that we can certainly take any representatives of this community to the desalination plant in Kwinana so that you can get a feeling for how much noise these things put out because I guess no one can actually answer that question 100% right now. What they can say is there is a heck of a lot of effort going in to deaden the noise coming out of these things. I have certainly stood outside the main building of the Kwinana plant and you can virtually not hear what is going on inside.

So, the offer is, we can certainly take representatives of this community up there to get a feel for that. Brian, will address an example of the noise issue. Brian, if you could please.

Brian Robertson

Thanks for that opportunity. I suppose an example is that associated with the Desal 1 is that part of that project is that we built a major pump station within 150 metres of a private residence. The pump station is probably half the power of what goes into the desalination plant. We have built that pump station, the people who owned the block alongside were very, very concerned, we actually took them to one of our pump stations at half the capacity, we actually took them inside the pump station, ran all pumps flat out, then we took them outside the pump station, shut the doors and they couldn't hear a thing. And they walked away very happy. Since then we have now built the pump station, alongside their property hence half the power capacity of the desalination plant and they have no complaints or noise come from that pump station. What they are trying is pumps. That is an example of the amount of sound proofing and the effort we put in to keeping the noise and the sound of the pump stations to within the natural background levels at the boundary of our site, and that is what we are required to meet.

Man

.....this area specifically because it is a very quiet area to live in and at night time we don't have to listen to any other plants, any other factories, anything else, because there is nothing else within hearing distance from us. That is what we are trying to say. My house is 600 metres from the beach and I can still hear the ocean at night time with all my windows shut at a night time. That is what I want to keep for the future for myself and my family and we don't want to have something down the road that is going to impact in a noise way on that. We did not buy here to eventually have a factory built right next to us.

I was just wondering if anybody in the opinion of you people up there have bothered to see what it has done to the sea bed in Cockburn Sound. Has the Dept of Environment gone down to look at the sea bed?

Greg Elliot

The question is about what is the impact on the sea bed, what is the impact on the whole marine environment. We can certainly answer that question.

David Luketina

Yes, I have been there. I have spent quite a bit of time on Cockburn Sound. The plant in Cockburn Sound is the most intensively monitored process for the environment desalination plant in the world. There is extensive measurement of marine life, marine life in the bed is actually quite sensitive, also we do tests on the very sensitive, so the smaller organisms, certain aspects of sea grass are quite sensitive. We do tests where we expose to the discharge of much, much higher concentrations than ever occur to check for any sensitivities or effects. So, there is all that testing, we measure the existing environment, all of those reports go to the Cockburn Management Council which is effectively the watchdog for the Cockburn Sound and also to the Environmental Protection Authority and there have not been any impacts of that. Also, I would add that in addition to that desalination plants of this type have been running for 30 years around the world and you are not seeing any effects from anything that has been properly done.

Man

So you don't know anything about dead fish, a white area that has got no sea grass in it around the end of the pipe and the loss of catch in the Cockburn Sound that has happened since the plant started up.

David Luketina

I presume the loss of catch you are referring to is to do with crabs?

There are a few things here. There are many reasons why catches change. For example, crabs in Cockburn Sound there is temperature changes. With the extensive testing that has been done and you can go and check with the Department of Environment, you can check with the Cockburn Sound Management Council and you can look at literature from around the world and there are no impacts on the environment.

Man

.....the dead Cockburn sea grass and theat the end of the pipe is nothing to do with you.

David Luketina

I am afraid you have got information that nobody else has. I can assure you this has absolutely no impact. If you want to come along and have a chat I can show you report after report by eminent scientists on a range of things, so I will leave you that question.

Greg Eliot

I think people really need to try and get a very, very good idea of what actually pumps out of these plants and I think the only way we can do that really is to lay it out for you chapter and verse and you can actually see it. I want to come down here, because there are people down here that have been waiting also and I am going to try to get right around to the chap in the front there.

I will repeat the question.

Man

I am from the South West Environment Centre, so that also Cockburn Sound, I mean how long has this been running up there since April. Is that really long enough to judge what damage it can do?

Greg Elliot

The question is about the desalination plant in Cockburn Sound and the question is it hasn't been running very long and is that long enough to tell really what sort of damage is being done, or if there is any damage been done.

Man

I am very surprised if you say there is no damage done. But, that is well and good. Yes, Nick was probably right too and he knows what I am talking about. I am concerned nobody has mentioned the actual amount of salt is being put back in the ocean. Can anyone tell me what 45 gigalitres of potable water will produce in the way of salt?

I think that will be certainly answered.

Greg Elliot

The question is about what is actually going back into the ocean, how much salt is going back into the ocean.

David Luketina

So, the first part of your question was, you say that the desalination plant hasn't been running very long, so how do we know the long term effects. Two things. Firstly, the desalination plant has been running since November and the other thing is, this is nothing new. Plants with exactly same process, the same substances, being discharged in a similar manner have been running for over 30 years around the world. So, we are not just relying on what we have done, but what happens around the world. So, these things have been running a long time. So, that is the first thing.

The second part of your question is what happens to the salt. The net result is we are taking fresh water out of the ocean, so basically we are taking.....

Man

That wasn't the question, I asked what quantity of salt is going back into the ocean. I want you to tell this community how much salt is actually going out in that ocean and ending up clearly in Geographe Bay.

And tell us where your plant actually ends.

Greg Elliot

One step at a time. If you feel the question is not answered we are happy to refine it and listen to you.

David Luketina

What leaves that plant, everything we take out of the ocean goes back to the ocean except for fresh water. That's what leaves the plant, the net result is we have fresh water out in the ocean. If you take an area of ocean, roughly 10 kilometres long by 5 kilometres out, natural evaporation takes far more fresh water out of the ocean. So to put it in perspective if we cranked up natural evaporation a bit we would achieve exactly the same result as the desalination plant. Now one issue though is, there is a difference, we are putting that salt back in a more concentrated form because once there is twice the salinity we are taking the water out. So it is absolutely critical and it is important that when we put it back in we ensure that it rapidly mixes and with the ocean some 50 metres from where we discharge it, as happens in Cockburn Sound it goes back to within a couple a percent of background salinity. That is key. Marine life is quite happy with that sort of increase in salinity and it naturally prefer the mixes. The structure we put in to discharge it ensures that we good mixing.

Man

I asked the quantity of salt in tonnes. Is it 100 times, 400 times?

How much salt in tonnes goes back into the ocean?

David Luketina

Next question, I will work it out and let you know.

Man

MyI'm probably not right up to speed but the quantity is 1½ million tonnes annually. I know this is true, if there was a company over there in Kemerton that decided to pump that much salt, and that is pure salt I am talking about not saline solution, into the sea here, what do you think will happen, you won't be allowed to do that, because that is exactly the position. It is not replacing the salt, it is not just taking it back again.

David Luketina

We are taking salt out and putting the same amount of salt back in as we take out. It is the same amount of salt.

Man

When you take the salt, how much salt did you have?

Greg Elliot

Look, we can answer the question, we can't deal with the..... The question is that we can give you a chapter and verse at times or whatever you like but the point is that the salt comes out, salt goes back and there is a quantity. We can answer that question. We need a bit of time to get it right down to the right amount. But we certainly can answer that question.

I am going to go up the back here now, the lady in red please.

Lady in Red

I am just asking about the amount of emissions, you said there were no emissions... There was no additions I have just done some research and my understanding that is there is a review of possible emissions and a possible 8,000 tonne.

Greg Elliot

You have greenhouse gas emissions – is that what you are getting at? So you have heard or you have researched about 8,000 tonnes of greenhouse gas. Once again, staying to the topic for the majority of your questions, most of them are environmental.

David Luketina

The plant uses aamount of energy, quite a considerable amount, let's be upfront about it. With that energy, it depends where you get it as to what the greenhouse effect is. If we use energy straight off the grid and will basically, so the energy you purchase, and typically get in your household, the majority comes from coal, part of it comes from gas powered electricity. Dependent as to the mix. If the desalination plant purely purchased that energy on the grid, very roughly, off the top of my head, there would be about 100,000 tonnes of carbon dioxide or the equivalent added to the atmosphere and in turn contributing to the greenhouse effect. That is one of the reasons why the Premier announced with this plant as was done for the desalination plant at Kwinana, renewable energy will be used. So, that renewable energy, something like a wind farm is not adding carbon dioxide to the atmosphere. So, when Nick said there were no emissions to air, again he can talk about the noise issue separately, he was talking about directly from the plant, so we don't have any smoke stacks, we don't have anything out there. If we purchased energy from the coal fired power grid, that would put emissions up but we are not.

Man (Distant)

Facilitator

We will certainly try and answer those if we can, they are fairly technical questions. I am going to go right up the back and then I am going to front, so the gentleman with his arm up in the air.

Gentleman

I just wonder how far are the pipes going into the ocean. What are the plans?

Nick Churchill

I guess what we are looking for is a water depth of about 10 metres and in the case ofhere, that is in the order of 500 – 800 metres, we are just doing a detailed design at the moment, so we will be out there surveying it in big detail but it is not close to the shore, it is not directly off your shore it is a considerable distance away from the shoreline. Does that answer your question.

There is a difference in inlet and outlet. The inlet is closer to shore, so you don't drag in. I guess the saltier water does sink, so your outlet is at the 10 metre line, where exactly we put the inlet depends a bit on tidal movement and depth from the gravity feed into the pipe... there is a few things like the slope of the bed as well, so it is definitely further in than the outlet.

Man

.....can see them from the sandhills.

Nick Churchill

Well, we don't. The question was how do we gravity feed into the plant. Effectively, like a big soak well, effectively where we pump from is below sea level, so although we have got dunes in the way, as per Desalination 1, the actual pumps and things are 30 metres down.

Man

It is not gravity fed, it is pumped?

Nick Churchill

No, no, what happens is it comes into that with gravity feed and then they pump it around the plant.

Man

You still use a pump? I thought the reason we were having it was because it is gravity fed.

Nick Churchill

Well it is. If you move inland.

Man

One of the reasons for having this desalination plant.

Nick Churchill

Just to clarify it, if we move away from the coast you have to pump all the way inland, and then we have to pump around the plant. What we are saying here is that to pump around the plant is one thing, but to get to that point you don't have to pump it so, I am just confusing everyone now, but effectively there is a difference. If you are 10 kilometres from the shore, you do have to pump it that distance.

Man

What is the problem with that? What is the big problem with pumping it there?

Greg Elliot

OK, we will deal with that because it is relevant. What is the problem with having the process plant a long way away from the inlet water. Nick, do you want to deal with that one again, we have dealt with it a couple of times before, but clearly people are not understanding it is about, if you like, the emission cost of the pumping, it would add significantly to the emission cost of the pumping to pump the water from the source in the ocean to whatever site that treatment plant might be. That is considered to be an extremely high cost in emissions, so therefore it makes it a non-acceptable thing to do.

Now, I did promise I would come to the gentleman up the front here for another question and then I will keep moving around.

Man

You took some nice photos of the surf and that, but Binningup sort of only gets storms between 4 and 5 months of the year and I want you to define the term "High energy coastline" because we might get storms or whatnot, but we don't get any tide to move this ocean around, you know.

Greg Elliot

Once again, we would refer you to an expert.

David Luketina

The key thing, when that term was being used, the key issue there is when the brine goes out to salty water we want it to mix. So when the term, "high energy" was used, it doesn't necessarily mean that you have to have bigger waves, but just the water itself is relative to that mix, so winds can be doing that, you have got the currents that are moving, so its a combination of all those things that are important. So, we know from direct experience ourselves with Cockburn Sound that the environment that you have got down here is going to mix at least as well and better, than Cockburn Sound is. The term 'bathtub' was used before and if you are not aware it has a much deeper pocket to effectively embayment, so it more challenging in that environment to mix with.....

It is happening quite successfully there, so we are completely confident that this environment here can disperse that salty water without an issue.

Greg Elliot

I am going to go the lady in blue again and then I am moving this way.

Lady in Blue

If the project goes ahead what are the anticipated impacts on the land values?

Greg Elliot

The question is what is the anticipated impact on land values. Now, I guess we could extend that question a bit further and say if they go down what will we do about it.

David Luketina

I don't know to be honest, but one thing we would say though, if our project has any direct negative impact on a landowner, then compensation for that impact will be something we can negotiate and which we do with all projects. Now, we don't anticipate it is going to be able to be directly linked to a change in the land ownership or land values. I mean, as I mentioned earlier what is going to be possible in this general area for existing community expansion and future land owner expectations for the government, that it is all tied up in this Structure Plan that is coming and we all need to be part of the process and understand what the impacts are, and that is one of the key issues we have already got right into when this project started. It is going to become clearer, but the challenge is to try and establish how we will integrate this infrastructure in this community in a way where it does not affect the large majority of people that are here now. That is our goal.

Greg Elliot

I am going up in the back corner now if I can thanks. There is a fellow right at the back.

Man

What benefit is this plant going to give to the south west in regard to water, or do we have to wait till you build the mega plant, before we get any benefit, or is it going to go to Perth and stuff the southwest.

Interjection

Put the plant on Scarborough Beach mate.
Or Cottesloe Beach!

Applause

Greg Elliot

We will take both those suggestions back.

Chris Elliott

About regional benefits. There will be regional benefits. I will try and explain what we think they may be, but we work very hard to liken it to the Stirling Redev... the Stirling/Harvey Redevelopment Scheme. That is.....a big part of this area. When the Harvey Dam was built and the pipeline was put through, the immediate regional benefits were a new water supply to a number of towns, Binningup and Myalup included and Harvey and Waroona, so security of supply by being on an integrated system you are getting consistent quality and consistent supply. Stirling Dam ran dry in the 2001 drought and water was supplied back to Harvey from the metropolitan ground water systems. So, being part of the integrated system is a major increase in security of supply and quality assurance for any water supply and so the regional benefit we expect to come from this major infrastructure that begins here, as I indicated that slide is very close to the greater Bunbury, we are talking Australind, in turn, Dalyellup, Bunbury itself and those other smaller towns Burekup,, but they are all close enough to be able to be hooked onto the system where Desal 2 water if it proceeds will probably be supplying the greater area that we live in here. So, that is the original benefit.

The other one is that major infrastructure being close to future major industrial developments and so forth, Kemerton Industrial Park has gone far, so again a big industry in there needs a big water supply, or potentially having access to the desal infrastructure will be something that is available. So we have a couple of benefits, that is not to mention all those benefits that go with a billion dollar project, so far as employment and construction phase, the ongoing maintenance and so forth. So, there generally is benefit and it will materialise as we go forward as something we will really want to talk about.

Greg Elliot

Thanks, Chris. Now the gentleman in blue.

Gentleman

I understand the question whether or not you have chlorine stored on site to chlorinate the water being produced. This is not the first to have a subdivision application blocked once because it was too close to chlorine storage tanks.

Greg Elliot

So, the question is, will there be chlorine stored on the site and will there be any impacts from that chlorine. Brian, I know you have dealt with this issue previously, so Brian you might be the best one to answer that, thank you.

Brian Robertson

As part of the process, the water will be chlorinated, which means to a plant of this size it will have chlorine gas stored on that site. The gas is stored in large drums, 1 tonne drums, they are housed in a building which is designed to contain any leakage out of those drums. We also do a very substantial analysis to look at wind direction etc. and to determine the buffers based on those building designs as well and that containment area. There is about one in ten million chance probability you have got to work with. We work within those limits, that is set by our dome licence, so again it is an external regulator who controls that and that buffer zone will be contained within the site. The other issue of the positive I suppose is the site that exists there does actually sit in a bit of a valley. Chlorine gas being heavier than air means it won't move out of that site. So, that is built in the analysis we do to look at the containment zones that we need, but also the main good thing is we make our buildings so they will contain any leakage of the gas at all out of that site, and basically we do have large chlorination facilities within the metropolitan areas. All our water treatment plants have chlorination facilities and they operate under the same licence conditions, basically all our dam sites also and we have public facilities at those dam sites and the public are allowed onto some of those dam sites as a normal thing. So, the safety issues are very paramount and that is part of the design effort, so we could put into that plant, so people can rest assured that it is a safe plant.

Greg Elliot

I am going to come around this way now. I will work my way through, this gentleman here and then I will be working through there.

Gentleman

I am sorry, I am not going to labour on it, but I just want one of my questions as recorded on tonight's meeting. You are going to approach the Environmental Department about noise pollution, correct?

David Luketina

Yes.

Gentlemen

Are you going to ask them to conduct tests, during temperature inversion conditions, in other words, easterlies, north-easterly winds, south-easterly winds when temperatures drop and the southerlies rise. That creates greater sounding propagation. In other words, in the layman's language, rising temperatures during temperature inversion create greater noise pollution.

Greg Elliot

Would someone like to answer. The question is about will the testing for noise be done in all sorts of different conditions. Can we answer that, David once again?

David Luketina

I'm glad you volunteered me. I don't know if you have actually gone down to the site itself, but if you do you will see there is a meteorological station there. The reason that that station is there, is to actually capture the full range of conditions that occur all year round. You are quite correct, that there is a range of conditions there, winds and things that are the more severe cases.

Gentleman

To record temperature inversion conditions.

David Luketina

The station is there. Basically what happens when we get the temperature inversions, basically the wind drops to next to nothing, so that station is monitoring the wind conditions there and we capture that. So, we will be monitoring those still wind conditions and also conditions, particularly where you have got winds that are blowing in the direction that the towns and populations, so then we can actually accurately model where that noise will go.

Greg Elliot

So, the noise will be tested during all sorts of different conditions.

David Luketina

The noise will be tested over a large range of conditions and I expect that the EPA and other environments who want us to, normally assess the most severe conditions. We will be doing all of their requirements.

Greg Elliot

Gentleman in the coloured jumper.

Coloured jumper

I have been given information that I haven't had time to research.... It is my understanding that some desalination plants, are being decommissioned because, I am not exactly sure why, but it has to with the environmental factors I believe. But I will research it, but I would like to ask you guys.....

Greg Elliot

Sure, there are certainly people here that have done lots and lots of this sort of research, but perhaps who would like to – Nick, can you deal with that one.

Nick Churchill

I am not a desalination expert in terms of what is going on around the world, I do know a little bit, and there are for example, in Spain at the moment, what with the plant we have got, there is around 15 new plants of this sort of size going in and there are a very, very large number of these sorts of plants going in as the world becomes more water stretched in various countries.

I am not aware of the one you are talking about and I would certainly be quite interested if you find anything there, and I haven't heard specifically about Santa Barbara, and unfortunately the person who is an expert on desalination around the world isn't here this evening. We are quite happy to record that and make sure, particularly if you leave your name at the end and your question, we will get back to you.

Greg Elliot

The gentleman in red thank you.

Gentleman in red

As far as the noise, more than that, people don't want to see it.

Greg Elliot

I think everyone understands the issue extremely well, it is what we do about that issue that is really important. Give us a question to deal with then, it is about knowledge once again, what is your question about noise?

Gentleman in red

Want are you going to see when you do tests?

Greg Elliot

I think the tests will be done before.

David Luketina

I will tell you what we did with the existing desalination plant, the one that is built now and the process that was undertaken for noise. One thing is, we have come down as soon as we could after the *Southern Seawater Desalination Plant, Binningup Community Meeting – 29 May 2007*

announcement was made. We don't have all of the answers for you. We are the first to admit that. We are here to listen. So we can improve on this project we will have better and better answers for you, and rather than going away and hiding for months on end, until we have sorted everything out, we thought it was much better to come down here and listen, so that is the first thing I want to say.

Secondly, the desalination plant, detailed measurements are going into background noise. So the first thing is to establish that, because it is relative to background. You said this is a very quiet place, so what that means is that this plant has to be very quiet. OK. Down in Kwinana there is more background noise, so the plant is allowed to be noisier. Before we build the plant, before we get approval we have to model the plant. So, we take into account the weather conditions as the gentleman talked about relative to background we have to show that we meet acceptable criteria. It's been our problem to actually do the engineering, to do the acoustics and everything else to meet what is deemed acceptable, and I can tell you that the Environmental Protection Authority and the Department of Environment are very serious when they set criteria on us. The plant in Kwinana has been audited many, many times in relation to all of our criteria.

So, that is something that we have to deliver on.

Greg Elliot

The guy next door.

Guy

Basically, you've said the facility is not being built at Kemerton, because of public disruption, Corporation owned space and the other one is costs. The only reasons I can see costs if is you built it right using the ...

Greg Elliot

So, the question is, is cost one of the major reasons why Kemerton would not be considered. Can we answer the Kemerton issue? OK – we will give it a shot.

David Luketina

I think some of these issues have already been covered. The cost would be a fairly significant factor. We haven't had time to look at those details yet.

Noise from the floor.

David Luketina

We do know the answer, all we know is we will have significant pumping costs.

Greg Elliot

Please allow the gentleman to answer the question.

David Luketina

There will be significant disruption to getting pipeline across there and back, so there are a number of factors we would need to be considering, and we will consider those and then come back to you when we have those factors, so at this point in time we haven't got all the answers. Sorry.

Greg Elliot

Nick, if you can add something to that please.

Nick Churchill

In terms of the dollars it is in the order of \$100 million extra just for the infrastructure. We are talking not kilowatt units, we are talking in the order of 5 – 10 megawatts of power additional, Desalination Plant No. 1 is 24 megawatts, so you can see that it is another again of that desalination plant.

Man

5 megawatts – generators of megawatts, a very small one is 25. There is no power around there. You have to address the issues of bringing the power, are you talking about pipelines, sidestepping the issue of power.

Greg Elliot

No one is sidestepping anything, we are trying to get a handle on the questions that you are asking and trying genuinely to give the right sort of answers. So, I would suggest that there is a fair bit of confusion, but the issue about Kemerton certainly has to be looked at and you need the answers. I don't think there is any doubt about it that you need the answers. So, I guess there must be a commitment, but we need to get those answers.

So, we need to be able to lay it out for you properly, otherwise there is just people arguing back and forth about what its going to be. So, let's keep moving on. Thank you.

The gentleman in the grey and then the lady in the black.

Gentleman in grey

My question is to do with, and if it's our problem just say, but obviously you guys, while we were all worried about your other issue you were doing a lot of research in the background about alternatives, none of those have been articulated, and I think a plant like this just sends the wrong message to the community. We should be sending a message of reducing, renew and recycle and all we are going through is have more, and if 50 gicalitres isn't enough, we will give you 100.

Greg Elliot

This is probably the biggest question you could possible ask.

Gentleman in grey

So, I would like to ask, what alternatives were you looking at?

Greg Elliot

This is huge as you are aware, that gets right into the political realm as well. I guess in principle we will attempt to answer this, but let's give it a go.

David Luketina

Look, I think if we just look back to the series of ground area 1, there was a border summit State-wide, there were contributions from the community across the State which resulted in the State-wide strategy. That strategy identified desalination and South West Yarragadee Groundwater as the only two viable options that potentially could deal with a major source of a 45 gicalitre source within a reasonable time frame, and we were convinced from that moment in going forward to pursue those two options and of course, Desal 1 got approval by the end of 2005 and got built and is now operating and Yarragadee we kept working on until last week. The Security Through Diversity slide really encompasses all the other options that have been under consideration and since that strategy. The only other big ones that are there are potentially Wellington in the future, which is a surface water source and again is the most climate-dependant option and will take lots of time, because there are many issues that take a long time to sort out.

Wellington doesn't present as an alternative. So, it was fairly obvious as we were getting towards the end of the Yarragadee that the decision had to be either go ahead with Yarragadee or another Desal, as probably the only viable fall back for the State.

Based on the Premier's decision and announcement that has confirmed that, there's really no other source which can yield the source of volumes required to keep pace with the system and to embrace the ongoing climate. We will still work on every one of those bubbles in the Security Through Diversity slide, there is a lot happening on slowing the use of water, demand management and some opportunities to be taken in trading water, we are going to manage catchments to get more run off where we can and there are other groundwater sources beyond the Yarragadee which will be pursued. And of course, the groundwater extracting in the metro area with the Gnangara Mound and that groundwater sources also under stress and that has got to be balanced.

So, the State does need a new water source and I think it is fair to say that at the end of the day, political minds have either a choice of going to the Yarragadee or listening to all the issues, responding to it and choosing Desal. They say, we are ready, and we are the first to admit, most of the speakers would acknowledge, that it has been a major shock to the whole community and there has been some background work going on for exploring Desal 2 options. As mentioned, at Kemerton, there was various amounts of work done, from Jurien Bay to Bunbury on every conceivable site and when they established the criteria, it was the Binningup site which jumped to the top of the queue for the reasons the guys here have outlined. But if the decision is we will go ahead with the Desal on the corporation site, but all the issues that are associated with that are what we are now to embrace and who knows what the outcome of that process is going to be, because it isn't an approved project until we have satisfactory answers on the total for every issue.

Greg Elliot

I guess that we would all acknowledge that. The lady in black and then I will come up to the gentleman in red at the front.

Lady in Black

There is a wastewater facility on site that we are actually using at the moment to treat our wastewater, where is our wastewater going to be treated?

Nick Churchill

The planning that currently exists I can outline briefly, the current planning is we have got that treatment plant there serving Binningup as it currently stands. As Binningup grows we need to expand that plant. We have already got projects earmarked now to increase the treatment capacity of that site to keep up with ongoing growth and to keep up with the pace for Binningup growth and if in the future there was a Myalup that was the basic site we head for for Myalup.

Given this decision, as we works through the issues associated with siting a desalination plant on that site, the first point is, as the team are saying, a 20 hectare footprint of land is need for the ultimate desal site, Desal 2 site. We have got 40 hectare site, so the first point is, can water and waste water co-exist on that site. That is an issue that the planning team now have to address. If the answer is no it can't co-exist, then de-commission and relocation of the waste water treatment plant would have to be a consequence of going ahead with desal. And the question is, what happens to waste water from there? The nearest major waste water facility is at Kemerton Industrial Park, then there is a waste water treatment plant at Kemerton which services Australind and Eaton, so that would the logical option if we can't stay with the local solution, to go to Kemerton.

That is our waste water, you have got to pump the volumes at the moment, they are the untreated waste water, Binningup is pumped to our site at the moment and treated and then disposed at that site. If we were to change direction you would have to pump from Binningup to Kemerton, yes you would.

So obviously, there is infrastructure costs and impacts which we have to assess in the total picture. Because to accommodate the desal we have to come up with a long-term sustainable solutions for the waste water and that is going to be a very important consideration.

Greg Elliot

I guess so we can get our logic right, there is a whole lot less waste water would potentially be piped than there would water – potentially.

Yes, if I could thank you.

Man

Excuse my ignorance, but with these talks. Desal 1 is in an industrial area? Can you tell me then, how close are houses to Desal 1?

Greg Elliot

The question is, is Desalination Plant No. 1 in an industrial area, the answer to that is yes. The second part of that question is, are there any houses at all around Desalination Plant No. 1, which I can answer that. The answer is No. It is an industrial area.

Man

We have previously determined that any buffer requirements within a kilometre of the desalination plant would be contained within the land we could put it on?

Nick Churchill

The waste water treatment plant requirements are different to the desalination plant and may require a larger buffer. We have many water treatment plants in the metropolitan area where we have houses in very close proximity, so we are saying that the buffer requirements for desalination plant would be contained within the land we have there. We don't require any other land at present.

Greg Elliot

I don't know whether that answers the question or not. Let's try and answer it again, because I am still unclear what the question is, I have got to tell you. So, we are saying, that there is 750 metres between the nearest house and the plant is that what you are saying? So, the question about the buffer, please try and re-state it so we can understand it.

Man

.....750 metre which is right next to me basically, what we are asking if you have got a direct line to your site, we are talking about the site actually being up the side. What we are saying is, perhaps 750 metres is not really a buffer zone as such. There is actually residential housing lots within that buffer zone.

Greg Elliot

Well, I guess there is no particular answer to that question, but it is a fact that there is 750 metres between the plant and what you are registering is that you don't think that is enough.

Given that we are not answering the question well, I guess there is probably a definition issue because these people here have a certain definition of what they think a buffer means. Quite clearly, other people will have a different definition of what a buffer means, so when we are talking about a statutory buffer, the chlorine storage, are we talking about a buffer for noise?

Man

Hang on, wait a minute, there is a 4 kilometre buffer zone around the Kemerton area – that is a buffer zone, that is exactly the criteria of a buffer, that is not that hard, we are asking this. If there is noise,

and there will be, and there will be light emission, there will be all sorts of other things that are going on, we are only asking if 750 metres is enough buffer.

Greg Elliot

I will go up to the front here and I will go that way. We really only have. The gentleman here, thank you very much.

Man

I have asked a few times tonight we haven't had a distinct answer on it, and we haven't got the numbers, but your research, non-consultative research, seems very extensive, in relation to the total cost of this, in relation to Kemerton and Binningup, can you provide us, not tonight, but at some stage with comprehensive costings on those two options just to see in percentage terms how much is added to the cost to build at Kemerton as opposed to Binningup.

Number two, all of the enormous extent you are going to go over the next two years in environmental studies, concern about the people in the area, all of that sort of stuff is going to be a cost as well, I think it is fair that we saw the actual costings and I think if we said we haven't got those costings, well if that's true, how could you recommend this decision to start with, presumably you did, without having had that information.

Greg Elliot

OK. Well, I guess there is two parts to the question. Let me commence, so the question really is, can we commit to doing that study, getting those numbers. I will ask Nick to deal with it, thank you Nick.

Nick Churchill

It is pretty easy. We do have the numbers, we have all the operating costs, basically in and out, capital expense, so we can provide that I think but I guess we don't have it at the tips of our fingers.

Man

Like next week or something?

Greg Elliot

The gentleman in red, thank you.

Gentleman in red

This is an extraction process, you don't get like sludge, seaweed and all that sort of stuff, what chemicals are you guys going to use to clean out all your pumps and filtration systems and where is it going to go? Is it going to go out your solution into the ocean, or is it going to be contained on site?

Greg Elliot

Questions what chemicals are used on the site. David once again. I am going to have to start wrapping up folks.

David Luketina

OK, there are two key steps in the process, one is a conventional water treatment plant at the front to make the water clean enough to go through the membrane, so that we have something called ferric sulphate that forms the coagulants and basically takes things out of the water, we stick that out and take that to landfill. So, that is the first thing, and that is in the first stage of the process. We can use some chemicals for cleaning. One of them is acetic acid, commonly name vinegar. Those chemicals are all neutralised and we take those off site and then process. So, it is basically, by and large we are returning to the ocean what came from the ocean.

Gentleman in red

So, when you have taken it off site are you trucking it, or piping it, and where to? Because I work with Alcoa and we deal with a lot on oncons and flucs and all that sort of stuff and there is trucks going in and out all the time, so there is another noise issue if you're having trucks in and out all day and then if you are not using trucks, you are piping it. Where are you piping it to and is that extra cost?

David Luketina

...there will have to be trucking movements and the question was are there going to be a lot of trucks or a lot of noise associated with those trucks. So, at the Kwinana plant which is going to be the same size as what we will initially build here, there is a truck that comes, one movement a day, so one 10-tonne truck each day leaves that site, so you are not talking a fleet of trucks going in and out each day.

It goes to a landfill, this is off the top of my head, so please don't quote me, but from memory it is a Class 3 landfill that we use for the existing desalination plant, so it has to be one that is classified to take that type of waste and once again, it is off the top off my head. As far as I am aware, and I have been talking to the local Shire, they indicated that locally there are not any landfills of that type.

Man

Where will that be?

David Luketina

That I can't tell you as yet. We will basically find the closest suitable landfill.

Man

You must have some idea.

David Luketina

No. To answer that we have at the moment from the existing desalination plant, it goes to a landfill site within the City of Rockingham, that is classified to take the salt sludge that goes to that site. So it is a licenced site suitable for that, we have an agreement there. Longer term, when we upgrade our Woodman Point waste water treatment plant that will be able to handle that disposal part of the treatment process for the waste water at the Perth metropolitan area. If need be, if there is no suitable landfill site within the shire or local vicinity that will be transported to Perth, either the landfill site or back to the waste water treatment plant process and it will be handled that way.

Man

If there is no suitable area around here do you mean?

Greg Elliot

Within this area yes, they will take it somewhere else. And I guess it is all in consideration and these type of things have to be worked out. Lady in white and then I am going to have to close off, I am very, very sorry. If you haven't had your questions answered you really will have to try and put them up with little yellow stickers and we will try and answer them in due course.

Man

Will we get the price for the whole of government, not just desalination, but the Water Corporation's whole cost. The second question is, is there anywhere in the world recycling the salt mined? Do any of the others dump it back in? It seems very facetious to put forward that you take it out and you are putting back in what you took out, because you are not putting back in what you took out, you are putting water back in. So, if anyone takes a glass of water and you start taking the water out of that, there is salt in the end of day you end up with a cup full of salt not a cup full of clean water. Therefore, what we need to see is, is there a way in which we treat the salt brine in some other way which is going to put it back into the ocean. Because, we would not allow fisherman to put all their fish wastage back in, even though those are part of us.

Greg Elliot

Is anyone aware of any recycling that has been done anywhere in the world.

Man

Basically put salt in.

If we were located in the northern part of the State for example, you would use the Dampier Salt Mine.

There will be tonnes coming out of a 48 gigalitre plant.

David Luketina

The question really is can we do something with that plant, so that the water is coming out twice as salty as seawater, rather than returning it to the ocean. If we were to process it further and try and extract the salt, there are two alternatives that come straight to mind. One is we can process it further but that requires significantly extra energy, if you take a lot more water out of saltier and saltier water, huge amounts of energy, it is just not practical or viable. What is done to produce salt around the world, the most common way is to put it in big evaporation ponds. If any of you want to go and have a look there is currently a proposed major development in the north of the State, where it is much drier to produce salt in there enormous evaporation ponds. These are considered to be a major environmental impact, requiring enormous area and the footprint we are talking about for our plant would pale into insignificance, so from a purely environmental perspective, I honestly wouldn't want to carry out that business. It is far better offshore.

Greg Elliot

I think the answer is no-one on this panel, knows or is aware of anything. So the question will be taken on board. The gentleman here?

Gentleman

My question is relating to the superficial aquifer. Now, I want to know how deep the plant pumping stations will be dug into the aquifer, and what safeguard will the producers on this coastal plain have that our water table will not be salted out in case of a spillage. And also, could you please talk about the power line, access in as well as the water pipe going out in costings. And I would also like to know if the government will give an undertaking that the pipeline will be buried on the highway at the end where people are.

Facilitator

There are several questions there and perhaps they will be answered in due course. If someone likes to answer all or each of those questions.

Nick Churchill

The actual pump well will be enclosed so there is no connection with the superficial, so there is no ongoing de-watering or discharge of salty water. When we talk about gravity flow, it will be contained within a glass reinforced plastic pipe coming in from the ocean, so the superficial aquifer coming inland would not be in touch with general salt water coming in from the ocean.

Man

The glass pipe (unclear).

David Luketina

To put this in perspective, I don't know if anyone who is actually very, very close to the beach has tried to put a bore down. Because what you have is the salt water naturally in the ocean being a little bit heavier actually does come in underneath the fresh water way that is there, so they can certainly for the

first few hundred metres next to the beach, you can actually have salt water there anyway under the ground with some fresh water sitting over the top, so both from a containment perspective and naturally there is salt water there, so basically you add any excess salt water it is going to move back out towards the ocean. There is a natural balance that occurs between fresh water, ground water which is flowing out to the ocean and salt water from the ocean is trying to push in.

Greg Elliot

The issue of power coming in, do you want do this as well.

Man

You are talking about extra cost to build in Kemerton, but nobody has addressed the issue of bringing it all the way here.

Nick Churchill

We are definitely going to bring power the power here and it is a major consideration in terms of having it either above ground, it is a major impact on all of the people that are near that power line. We are looking at that. We have looked at some of the preliminary routes, but essentially a lot of that comes down to starting consultation with Western Power. As of the decision, we are basically going to them at the moment and we are looking at proposals for their transmission, essentially it is their transmission lines, so we will be trying to look at the options there including underground if required. Underground is hugely expensive for 132 kilovolts of power lines, but it is in the mix. Well, 25 metres required by a 132 kb power line, so essentially that is in the mix, so underground, above ground corridors are being looked at, similarly to pipe route corridors and the like as well. So we recognise it is a major impact to the community as well.

Greg Elliot

Now the lady in white and that is honestly going to have to be it. I am very, very sorry, but we will take up all the little yellow stickers.

Lady in white

I have just two very simple questions really. We have been talking about the monitoring required, the codes by EPA etc on Cockburn Sound. One of the reasons you said you were looking at Binningup is because it is open water. Can we assume the same stringent monitoring requirements for the pipe here at Binningup?

Greg Elliot

The question was about we were saying the same stringent monitoring activity be placed here that we have got at Kwinana. That is one question.

The answer to that is yes.

David Luketina

I would expect there would be some differences, so I would expect them to focus a little bit on more of the bigger issues here, so noise is certainly that something compared to Kwinana is not such a sensitive issue, so I would expect them to focus on that more.

And for the ocean, there will be some different aspects I would suspect that they will focus on here. We have to look at exactly what marine life is there, seagrasses and everything else and they will have certain things that they want us to focus on, perhaps more here on certain aspects than Cockburn Sound, but yes, there will be intensive monitoring, that is our expectation.

Absolutely, before, during and after absolutely.

Lady in white

You have got 40 hectares, you are referring to occupying 20 of those 40 hectares. Can we assume that that is the overall size for the 100 gegalitre. Is that what you are going to be required to have?

Nick Churchill

Like I said Desal 1 is 6.5 hectares, so when we talk 20 hectares that would be the full optimum proposal.

Greg Elliot

I am sorry for those people that have missed out on being able to ask a question, I might concede on this because I know this lady is very, very keen. One question and then we will stop.

Elderly lady

We all like to have access to clean water and we all like to have water coming out of our taps. Simply just tell us, how close this season have we come to running out of water at the Harvey/Stirling Dam.

Chris Elliot

The service from our storages in the inland water system are very, very low. They are in the order of a quarter full and although that figure is not quite as severe as they have been through drought beginning 2001 and a couple of years after that. But very, very seriously though we have got through this period but we are now entering the winter where we do need re-charge of those systems. As I said, Binningup is part of the water system, so are a number of the communities around the southwest which are not part of that system have been more severely impacted. We have got, one day a week sprinkle dams in various places and many communities have had to cart water. Last winter was a very dry winter, so going forward there is risk to the integrated water supply system. We are better off because Desal 1 is now contributing, but to the four years between now and when hopefully the next major source comes in, the risk will be increasing each year as the system grows and that will be monitored very, very carefully. The hope is more severe restrictions are not required, but obviously there is no guarantee. It depends on the climate and the winters we have.

Greg Elliot

Thank you all very much, I know that you have got loads of other questions, I am going to ask Marie just to very quickly finish of so just bear with us and it is Marie closing, thank you.

Marie Dilley

Thank you very much, I would like to thank the Water Corporation for coming tonight, it has not been an easy job for them, because they haven't had much time to prepare for this meeting, they didn't want to have it tonight, they wanted to have it a little bit further down the track. But, I thought it was very important that as residents of Binningup and people associated with Binningup got some answers. Tonight is just the start of us finding out more. I thank you all for your patience and your co-operation and next Monday afternoon at 3.00 p.m. there will be a meeting of residents at Binningup. I have asked the media not to come, I would like that to be a meeting where we could actually listen to the opinions of other residents living in Binningup and understand where we all want to go. So that is next Monday at 3.00 p.m.

Thank you very much for your patience and thank you very much for your attendance and have safe trip home.