

Event: Public hearing on the draft Water Resources Law

Date: 19 July 2004

Chairman: Senator Jean Le Maistre

Panel Members: Deputy Gerard Baudains
Deputy Philip Rondel
Deputy Rob Duhamel

Adviser: Dr S Sutton

Witnesses: Solicitor General
Senator P. Ozouf, President Environment and Public Services
Committee
Mr. C. Newton, Director of Environment
Mr. G. Jackson, Assistant Director - Environmental Protection
Dr D. Peach, British Geological Survey
T. Williams, Environmental Lawyer
Mr. D. Norman, Chairman, Jersey New Waterworks Company
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Mr. H. Snowden, Managing Director, Jersey New Waterworks
Company Limited
Mr. C. Leach, Concern

**TRANSCRIPT OF EVIDENCE PROVIDED TO THE VIBERT SCRUTINY PANEL
HEARING DATED 19th JULY 2004
ENVIRONMENT AND PUBLIC SERVICES COMMITTEE**

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PRESIDENT: Good morning.
JEAN LE MAISTRE: Good morning.
PRESIDENT: Now, we've got a team. Where would you like us to sit?

1. Seating arrangements

JEAN LE MAISTRE: If you would sit close to the microphone with whoever's your main person advising you next to you and then, if you want to draw on any others they will have to move to be near a microphone at that point, so that it can be recorded.

PRESIDENT: Right. Well, then I suggest that we arrange ourselves so that we can, if necessary share these microphones here. So, I suggest that we line ourselves up around here.

PHILIP RONDEL: I'm sorry but that's not how it works because the microphone is set and we had a problem last week and everything had been recorded and therefore ... If I might say, Mr Chairman, it is not for our invited guests to come and rearrange the way people are seated at the table. It is for you to take charge of the meeting and insist that it is run under the manner the panel have already agreed.

JEAN LE MAISTRE: What I would draw to the attention of those who've come in for the scrutiny session is that the process of scrutiny as we have been trained in and the evidence that we had from Scotland and other places is that the person - the politician - coming in usually has one advisor next to him with others who are behind who may pass notes and other information to the Minister usually is the case, rather than what has happened just now.

I think we're all in a learning process, so I don't want to make a big issue of it but I think that for the future we need to recognise that that is the process usually that is conducted elsewhere; and I would hope that we will actually devise a process which everybody understands.

PRESIDENT: Chairman, thank you for that. I would just wish to respond by saying that I did write to you on 1 July indicating that I would be attending with four advisors. So (overspeaking)

JEAN LE MAISTRE: Very sorry, but normally they are seated behind the President and could be drawn forward if necessary, which is what I indicated prior to yourself actually determining where your officers would be, which I don't think is the right way to go about it but anyhow we'll go over that for now.

2. Statement

JEAN LE MAISTRE: What, as you know, we have to do is first of all we have to read the statement here so that everybody is fully aware of the process that we're going through. So, I will read this and there should be a copy in front of you. It's important that

you fully understand the conditions under which you are appearing at this hearing. You'll find a printed copy of the statement I am about to read to you on the table in front of you,

"Shadow scrutiny panels have been established by the States to create"

3. Timetable

So, may I first of all, in welcoming you, introduce Dr Sutton who is here as our technical advisor. We also - and I think it probably would be wise to sort this now before we proceed in terms of the timetable. The one thing we have had to recognise we wanted to get the Solicitor General in first before we start the process of Scrutiny and we have just done that.

We now have a period which we had allocated two weeks ago between now and 12.30pm. I understand that, President, you have a problem with that and would wish to leave at 11.30am. Is that still the case?

PRESIDENT: It is. I was under the -- we were originally supposed to start at 9.30am and I was scheduled here to be given two hours. I have to attend another -- I have to attend the Trinity infill inquiry at shortly after 11.30am, so I'm afraid I am going to have to leave you at 11.30am as arranged.

GERARD BAUDAINS: Could I perhaps ask if it's not possible for the Vice President to take your place, because it does seem to me to be, as we have people who've come from England. Several people have come from England especially for this hearing. It does seem a little discourteous to them. It would be a waste of that resource if we have to curtail the meeting at 11.30am --

PRESIDENT: Well, Chairman, the timetable was agreed. It's now 10.20am and we still haven't got into the business of dealing with this. I will attempt to -- it is a difficulty for me but I will attempt to stay here until 11.40am; I have to prepare for the other matters this morning and I'm afraid that this was alerted to me very late on in the day last week that you'd decided to change your timing.

GERARD BAUDAINS: But, with respect, you haven't answered my question; why is it not possible for your --

PRESIDENT: Because you didn't give us enough notice, Chairman; that's the reason why.

GERARD BAUDAINS: The notice, as I understand it, was several weeks.

JEAN LE MAISTRE: 1 July, I think, the timetable was altered between 9.30am and 12.30pm.

MALE SPEAKER: 5 July.

JEAN LE MAISTRE: 5 July, yes.

GERARD BAUDAINS: So, you've had with respect, Senator, you could have had sufficient time in my view to arrange for either your Vice President or indeed another member of your Committee to take you place, sir.

PRESIDENT: If we would like to discuss timings and you burrow further into our time, then

that's fine. But, I'm sorry, I was advised that I should be here until shortly before, as I understood it originally 12.00 midday. I'd had a conflicting constraint on my time in two directions: one because I am to attend the Trinity inquiry, the other because you have sought to change your own timetable and for us to start more than an hour later.

GERARD BAUDAINS: Well, with respect though, Senator, it is unusual to change the timetable and do as you say. I think we should get on with the business.

JEAN LE MAISTRE: Yes. The Attorney General was unable to attend and the Solicitor General had to come instead. We recognise - certainly I do - that everybody has difficult timetables, but I'm sure you're likely to realise that we are unlikely to complete within the short time available to us. And therefore, we will need to set another time which is already down for next Monday when Dr Sutton would be with us. So what I would propose is that we would try to organise another session for Monday morning and we would be able to complete the task then because beyond that, we get into August when people are on holiday.

So, if we could commence, the question that I would like to ask is basically the principles, which underpin the proposals for the law, rather than the detail at this stage of the law?

4. Introduction of Environment and Public Services Team

PRESIDENT: Well, perhaps in making some opening remarks, could I just maybe introduce the team that's here before you to attempt to assist me in answering your questions? And I must say that we take all the opportunity -- we welcome the opportunity of discussing this whole matter with you. We think it's an important matter. It's high up on the priority list for the Environment of Public Services and we think that it's useful that there is this review going on.

I couldn't help but observe when I was reading my own briefing papers over the weekend that apparently the water which we are seeking to protect and deal with in Jersey is 20 years old and indeed it's 20 years since the Environment of - - well, the predecessors of the Environment of Public Services Committee went back to dealing with this. Some of the people around the table have been involved in this matter much longer than I have and therefore, are going to be able to assist you in answering questions.

I'm sure you all know Chris Newton, who is the Director of the Environment who is to my right. Next to him is Gerry Jackson who is the Assistant Director for Environmental Protection. He will be able to certainly give us a lot of details and backgrounds. We have Terry Williams who is the Environmental Lawyer advising Environment of Public Services over many years; Mr David Hull, who is

the Assistant Law Draftsman who has been dealing with all of the law drafting for this matter; and also, to my immediate left is Dr Dennis Peach, Head of Hydrology at BGS UK and can assist us in dealing with a number of the technical matters.

5. **Background to law and fundamental principles**

You asked, Chairman, about the background to the law and it's goal of fundamental principles. Certainly, as the new President of the Environment of Public Services, I've had to go back and look back and see all of the history. And indeed I think the starting point which is important to recall is that of the late Major **Riley Committee in 1992**, which examined the whole issues of water resources and made a number of important recommendations which were -- which went on to be formulated into a report and proposition to be considered by the States in 1992.

We've given you a detailed chronology of all of the background from that time on. I think that the evidence that we've presented to you is that the -- there is a legal need, but there is a clear need for the law, which was identified in Riley and that has continued. In fact, if anything, the case for the law, the reasons - the fundamental principles behind the law may be even stronger in 2004.

In fact, I would offer the suggestion that in fact it's taken too long for us to put in place the strategy framework that this law puts in place. It is a requirement and has been a requirement from international bodies - the EC is setting standards in terms of water regulation across the **European Union** and Jersey must indeed catch up other jurisdictions in order to put these fundamental principles in place.

As far as my Committee's concerned, water, water protection, water conservation, raising standard in terms of water quality is going to be a dominant issue for my Committee and my Committee regards the progression of this important piece of legislation as **one of its top priorities in the next 14 months**.

I can -- in answering your individual questions, I can attempt to deal with the high-level issues but I will - with your permission - pass on some of the fundamentals to the people that are with me. But in terms of the fundamentals, I think that it's absolutely clear that the Riley Committee identified that there should be put in place in Jersey a fundamental statutory framework for water and the protection of water quality in Jersey and that -

JEAN LE MAISTRE: The Riley Committee, of course, made a number of recommendations, not just that one.

PRESIDENT: Of course.

6. Framework for Water Quality and Water Quantity

JEAN LE MAISTRE: But perhaps there are a number of areas that we ought to try to deal with so that there is a sort of sequence, a logical sequence, in this. Throughout the paperwork underpinning the need for the water law, there is nevertheless coming through, the issue being that **it was a question of water quality as much as quantity that was under pressure**. Do you agree with that? Is that still the case and if so, what is the up-to-date information on that?

PRESIDENT: This law seeks to put in place a long-term planning framework for both water quality and quantity and I think that I would not -- I don't think I would suggest that it is -- that the quality or quantity issue is any more dominant. They are absolutely both vitally important.

7 Draft Law and customary rights to ownership

JEAN LE MAISTRE: Deputy Duhamel?

ROB DUHAMEL: Yeah. We've heard that the Riley Report was the report as far as the Committee are concerned and the recommendations within it were certainly the right ones. I'd like to draw the President's attention to page 7, conclusions item 27 of that report, where it actually states halfway through that, "It's been urged upon us why several witnesses that any such legislation should vest the ownership of all natural water in the States"

and it goes on to say,

"We do not, however, believe that such a controversial and emotive step is necessary and we are satisfied that sufficient controls and safeguards can be incorporated in the new law without the States having to require the ownership of water"

In the questions to the Solicitor General it would appear that for certain customary rights of ownership of water will be abrogated by the legislation and I'd like to have the President's comments as to how he can actually reconcile the conclusions to the statements made by the Solicitor General.

PRESIDENT: We're not taking ownership. That issue was, as you rightly point out, a matter which Riley -- the Riley Committee recommended and has been -- and was subsequently discussed at length by the successive Public Service Committee and this piece of legislation as it is presented to you does not deal with nationalisation of the water resources in Jersey. It does to an extent issue and put in place a State control over it but it stops short of actually transferring the ownership of those resources from the individual to the state.

But, insofar as it is meeting our objectives, our objectives are not one of -- we

don't believe that we need to put in place -- we need to own all of the water below Jersey in order to meet the objectives of safeguarding the future supply (inaudible) in terms of quantity and quality. We don't need to own it. This is a -- this law puts in a framework which meets the objectives which is not ownership.

8. State taking away the right of ownership?

ROB DUHAMEL: No, but is it not the case that by taking away certain rights - free rights - that are held by a landowner to the water flowing over his or her land, effectively that is equivalent of taking away the rights of ownership whereby they're not freely able to do things that they would be able to do otherwise?

PRESIDENT: We don't live in a nihilistic world, do we, Deputy? The State interferes into our lives and interferes into our lives to the extent that it is acceptable and appropriate to do that for the general public good and we fully accept that the state is interfering to some extent into the water resources of Jersey. There are numerous examples where the state is intervening - planning law, all of the other utility companies which we have passed legislation before the States interfere and put in place rights of access to land that this law also will seek to put in place. That is the role of government, to balance the interests of the individual from the interests of the overall public good. I don't know whether or not Chris will --

9. Why does the States wish to interfere with rights of landowners?

ROB DUHAMEL: Well, before somebody else comments, sir, could I further ask in that case could you actually précis for us the overall reasons why the States would wish through your Department to actually interfere in the rights of landowners in what they do or don't do with their own water?

PRESIDENT: Mm. Well, I would state again that the law does not transfer the ownership of water resources --

ROB DUHAMEL: No, I've heard that but --

CHRIS NEWTON: Yeah. So, the extent to which we are interfering is that we are putting in place a - we propose a system of licensing for bore holes in Jersey. Sorry, could you just repeat your question?

ROB DUHAMEL: Yeah. I said could you précis the main reason overall for the States' interference into the rights, the customary rights, of landowners in the usage of their water?

CHRIS NEWTON: Yeah. I think the issue here is that we're talking about what is clearly **a finite and arguably from time to time scarce resource** that is a resource that meets a common need of all people in the island and therefore the law attempts to set out a framework for regulating the use of that and that, by definition, will impinge

upon the rights of some individuals.

But at the same time the other facets of the law actually provide **protection to the rights of those individuals and will recognise and provide for current rates of use to be licensed, in some cases, and protected and will protect those rights against further use by other individuals that might derogate from them.**

So I think overall, it's a reasonable balance between protecting the existing use, the legitimate use of landowners and individuals, but also making provision for the overall management for the common good of people of the island.

PRESIDENT: Water is a scarce resource. I think we all recognise - even both sides of the debate that have surrounded the putting in place of a water law for Jersey would all admit that water is a scarce resource and therefore it needs to be protected. This is about -- this is a not uncommon approach that governments have taken around the world in order to put in place certain controls in order to secure and to protect that scarce resource.

TERRY WILLIAMS: May I chip in, sir? It may be of assistance to the Committee if I were to refer you to **paragraph 5 of the Riley Report**, sir, and in particular to the first sentence of that paragraph where the Committee indeed addressed the issue that is now raised by Deputy Duhamel: namely the fact that the introduction of statutory controls will indeed have some -- some - I emphasize the word some - abrogation of proprietary rights. But nevertheless, the Committee - that is to say the Riley Committee - came to the firm conclusion that that was considered to be in the **public interest, i.e. for the benefit of the community as a whole.**

10. What data has been collected since the Riley Report to support the argument for the depletion of water resources in the Island?

JEAN LE MAISTRE: That paragraph, if I can just pick up on it, it does say, *"As fresh data is produced the need for safeguarding the water resources of Jersey and their quality becomes more urgent"*

That makes an assumption that things are going to be changing for the worse rather than for the better.

MALE SPEAKER: Yes.

JEAN LE MAISTRE: Data collected since the preparation of BGS reports supports all the conclusions made in the report and opinions presented to us by experts and specialists.

Now, this of course, was quite some time ago and it seems to me that one of the questions we need to ask is what is the data that has been collected since then which actually strengthens that comment or otherwise, which helps you to

maintain the same conclusion?

GERARD BAUDAINS: Can I come in there because it seems to me that the draft law, in fairly full measure, follows the recommendations that were basically the recommendations of the **Riley Report**. And it does appear in reading it that the - possibly one of the major foundation strands of that is item 23 of the conclusions,

“We are persuaded that the groundwater resources are being depleted faster that they are being replenished”

It would seem that that is the underpinning of the recommendations. Could I ask if that situation still prevails and if so could you supply the evidence that backs up that statement contained in conclusion 23?

PRESIDENT: May I just say that I understand the suggestion that's being made that effectively, if you believe that groundwater levels were being reduced, then that is a -- that would have been one compelling reason in order to construct a statutory framework for water in Jersey? **But, even if one had recent evidence that groundwater was not being depleted, and indeed was rising, would that lead you to the conclusion that you still would not be putting in place some sort of statutory monitoring arrangement for water?**

The water that is being abstracted, under the evidence that I have read, is coming from the sky. It is coming from the annual rainfall figures, but the age of water as I am told - and I'll ask Dr Peach to make some comments of his own - is in the region of 20 years old. Therefore, we do have an obligation in order to monitor what is the arrangements that are going from the sky into our groundwater and sucking it out again.

Even if one were to find a further, another supply of water - presumably if it exists it's deep in the ground - would that mean that you would not be putting in place a regulatory framework for water conservation? As I understand it, Scotland is endowed with huge amounts of water, but they are a jurisdiction who are putting in place arrangements for water - a form of licensing and monitoring.

So, I think I understand where the line of arguments could go, but I'm not sure that even if I think that at the time - Dr Peach can comment - at the time there was a view that water resources were being depleted. But even if that were not true today, would that mean that one would not be progressing some form of statutory framework? I mean I'm not at all -- I'm not at all sorry that that would be the case.

11. What is the evidence for the asserted depletion of resources?

GERARD BAUDAINS: It would be easier if we went through actually establishing fact as we went.

What I'm asking is there was a statement that the resources were being depleted faster than they are replenished. What I would like to know is was that a fact then? Is it a fact now, and if so, do you have the evidence, I presume, to back up that --

DR PEACH:

Yes. Now I'll make some comment on that. In the **drought of 1989** which prompted the Riley Report and various other investigations into water resources the water resources of the States became under considerable stress. There's no doubt about that and there was a severe drought. Since that time, of course, there have been measures put in place to store for public supply to guard against the possibilities of droughts causing public and private hardship.

It is a fact that water levels go up and down with region and (inaudible) which I think is dependent on rainfall. The current situation as of today, or a period of time -- you can't really view water resources at an instant when they're shallow water resources, when they're young water resources, and that's the one we're talking about here.

At this moment, they could be said to be more or less in balance. Any fluctuation in that balance would be taken up by less flow to the rivers, groundwater supplies, bore holes, some of it flows out to sea. Most of it flows to the streams that flow in the interim part of the (several inaudible words).

If you put stress on the situation either by pumping a lot more out or by there not being as much infiltration recharged from rainfall then you have less to purvey, or you have less flowing to the streams. The streams also support public supply, about 50% to 60% - those aren't my figures, they're the Institute of Meteorology's figures - of water in the streams comes from groundwater and, of course, public supply in the States depends on surface water abstraction. Now they can pump during the winter for run-off when it's raining and groundwater, and pump to storage for some ...

12.

Planning for any future eventuality requires knowledge of resource and knowledge of use.

But in order to plan for any eventuality in the future you need to have a variety of things in place. Knowledge, where your water's coming from; how much approximately you have, you're never going to have a perfect equation, if you like, and it varies year to year, so you can cope with eventualities like drought, like extreme events. So you can cope with changes in public desire, changes in demography, changes in population. **At the moment the States isn't equipped to be able to do that in terms of its regulation of the shallow water resources it depends on.**

So you need knowledge of resource. You need knowledge of the use. We don't even know at the moment the detail of where these 4,000 or 5,000 or

6,000 bore holes are that people rely on for agriculture and industry and private supply of its supply.

And once you have that knowledge then you need some mechanism to be able to regulate for the benefit of those people who use the water and the benefit -- and that's everybody in the country who drink.

13. Shallow water resources

GERARD BAUDAINS: You mentioned on two occasions there the shallow water resources. In the committee's submission I believe, correct me if I'm wrong, the suggestion is that the depth to water is somewhere in the region of 5 to 10 metres generally and the thickness of the aquifers is approximately 25 metres.

DR PEACH: Yes, I don't think I suggested above ten metres but if you could think of the shallow groundwater and surface water regime as being a sort of skin - that's a rather unfortunate analogy perhaps - but the water tables are going up and down and it's probably at the order of tens of metres thick. That is due to it being at the surface, (several inaudible words) means the ground surface. And normally the depth of the water is a few metres times, 5, 10, 15, 20 metres down, because it's a low lying island.

14. Evidence of deeper groundwater resources?

GERARD BAUDAINS: Now if there was fairly usable quantities of water found at reasonably deeper depths, would that alter your calculations or your views at all?

DR PEACH: If I were presented with evidence that there were substantive exploitable supplies from 100 metres, 200 metres depth, which I haven't been and I don't see any scientific investigative evidence. I haven't seen any to show that. Then I would want to be assured of the sustainability of those supplies, clearly because, you know, it might be a (several inaudible words) and things like this that store water, and there would need to be investigations of that nature. And that would alter -- there's no doubt that would alter the calculation of the total water buffers, but I haven't any of that with me.

15. Any research undertaken on groundwater resources?

JEAN LE MAISTRE: Could I pick up on that before we move to Deputy Rondel? You say there's no evidence of that. Has there been any research undertaken at all over the last 20 years on --

DR PEACH: Not as far as I'm aware (overspeaking) depth --

JEAN LE MAISTRE: Of BGS or ...?

DR PEACH: Well, by anybody in the depth, you know, of the sort of (several inaudible

words) in excess of 100 metres which I think -- I believe is what you may be referring to.

16. Regulatory framework for monitoring and protection of deep groundwater?

SENATOR OZOUF: But may I? Even if one were to find such a source, we have no evidence, and the committee has no evidence of the existence of it. No evidence, even if it were to exist, of the ability to extract it economically, efficiently. We've got no idea of the quality or anything. Even if one were to find that, would one then not put in place a regulatory framework for the monitoring and protection of the water resource in the lower ground, in the aquifer? We don't know how many bore holes there are existing, we think it's 4,000 to 5,000. We know that they are bore holes of a relatively low depth in terms of the water that they're taking. We know where that water comes from. It's coming from the rainfall.

GERARD BAUDAINS: I would say the answer to your questions will be found in the report when we've written it. We need to take all the evidence first before we decide whether it was necessary.

SENATOR OZOUF: Fine. But we would argue, or the committee would argue, that the knowledge that we have got about the bore holes that are currently abstracting water in Jersey are -- and the knowledge of where that water's coming from, means that it's appropriate and the data that we have about the rising and falling level of groundwater, and the quality of it, lead us to the conclusion that it is necessary in the overall public interest to put in place a statutory framework in order to monitor and plan for that resource.

17. Would a regulatory system be necessary if there was an alternative deep source of supply?

JEAN LE MAISTRE: So may I ask, if there was evidence which actually would support that there was a resource below the level which you're suggesting that could influence the way in which the law is framed presumably?

PHILIP RONDEL: I've got to come in here. I've been waiting to put a question for 20 minutes, Mr Chairman. I've heard a lot of people coming in and interjecting. The President and one of his officers is supposed to be answering the questions and we've got people coming in, and I've got no objection because he's been highly qualified. I'm reasonably supportive of the law as it's going forward but there's a lot of questions that need to be asked, and we want to draw out the information and not have a lot of people interjecting. Whether it's through the Chair, or whatever, but please do it through the Chair.

JEAN LE MAISTRE: Well, I wanted to follow up that particular line and then I was going to come to you.

SENATOR OZOUF: I think it's fundamental, Chairman, that we do dwell some time and if the Deputy wants to ask some questions about this particular issue, it does seem to me, and having read all the background of this, that there is a fundamental point here about whether or not we would be putting in later statutory framework if there was an alternative source of supply. And I would have thought that this debate is actually of quite some considerable use to you in your deliberations. But if Mr Newton perhaps could ...?

CHRIS NEWTON: Yeah, I'll try and make my answer brief. I was going to make the point that the law deals with a range of parameters. It doesn't just deal with groundwater, and I think whilst you're pursuing a line of questioning to do with groundwater we shouldn't lose track of the fact that **the law deals with the totality of water resources in Jersey**. It deals with the flows in the streams. It deals with the possible impoundment of those flows in streams, and it deals with the proper distribution of water resources and the protection of flora and fauna. So I do think that, just so we keep our eye on the bigger picture, the law has a wide mandate and **it isn't just dealing with groundwater, deep or otherwise**.

18. Definitions: Well, borehole, groundwater, pond - what is covered under the Law relating to abstraction

PHILIP RONDEL: Could I have, in your view, what the definition of a well, definition of a bore hole is? It's not in your report. And further to this, if I could put two or three questions at once and you'll obviously be able to decide who's going to give the President the answer?

Is there sufficient understanding to justify the treatment of the whole Island as a single catchment area? Okay? And then what is the regulatory principle and the mechanism by which the applications to abstract will be determined?

TERRY WILLIAMS: Well, may I make a point, sir, which I think may be of assistance to Deputy Rondel on this? I would refer the committee, if I may, Senator, the definition of groundwater in the bill itself, as I'm sure you will have appreciated, it's an all-embracing definition. By that I mean it relates to all water beneath the surface of the ground in the saturation zone. It doesn't distinguish between water in a well as opposed to water in an aquifer, and it does not distinguish between water at a shallow depth as opposed to water at a deeper depth. I hope that's of assistance.

PHILIP RONDEL: Yes, but I still need the definition of a bore hole and a well, whoever's going to answer that.

DR PEACH: The difference between a bore hole and a well, a bore hole is normally drilled using a drilling rig of some sort, and with you well, you don't.

GERARD BAUDAINS: There's a technical difference in the law as far as I'm concerned, so we were

led to believe earlier.

MALE SPEAKER: I'm sorry, sir, I don't understand the observation you've just made then.

GERARD BAUDAINS: The water in a well is deemed as being owned by the landowner. There was some debate over whether water in a bore hole is owned by a landowner.

DR PEACH: I personally couldn't comment on that one, it's a legal issue and I'm not --

GERARD BAUDAINS: Well, I think what Deputy Rondel was suggesting, because as we've already been told we are putting it all in the same bracket, they may be needed in future to be treated differently.

CHRIS NEWTON: I mean the simple answer is that whether the hole you've pierced into the earth's surface is a big broad hole that you might call a well or a long thin one you might call a bore hole, the requirements of the law will be the same. That the person taking water from the ground will be required, if the amount they're abstracting is greater than 3m³ a day, they will require to have a licence to do so.

GERARD BAUDAINS: With respect, if any matter should end up in the Law Courts there will be a difference, as I understand it, between the way the two are treated. I would just raise that with you.

CHRIS NEWTON: I have no competence to comment on where you're coming from. I can only say what the law provides for and that provides for the abstraction of water from the ground to be covered by the licensing provisions unless it's exempted because of quantity.

PHILIP RONDEL: Therefore a sump, which can be naturally occurring, which it could be open to the elements would be described as what? Where would it fall within the law?

CHRIS NEWTON: I don't understand what a sump is in your ...?

PHILIP RONDEL: A sump is a collection of water in a hollow, similar to a well, which has not been manmade.

CHRIS NEWTON: I think I'd probably call that a pond.

DAVID HULL: What this law does is to control the activity of abstracting, so if a human being is part of abstracting that's not within the ambit of this law.

SENATOR OZOUF: Just as an interim, I'm trying to contact my office in order to see whether the Trinity (inaudible) enquiry will permit me to attend half an hour later so that I may stay with you a little longer in existence.

19

Sustainable development and protection of water resources

GERARD BAUDAINS: It would be very useful if you could.

I'm now turning to the submission that you made on item C, 11A on page 5. You state that the laws provide for the sustainable development of Jersey water resources through the protection, management and regulation of water

resources and the protection of the flora, fauna and habitats dependent there, a matter which was earlier brought to our attention.

Could you explain to the panel what you mean by sustainable development? And what is it that you seek? Precisely what do you seek to protect the water resources from?

SENATOR OZOUF: Well, I'm going to -- the committee is assisted by a known UK expert on sustainable development and concepts and the thinking behind that, and that's the man sitting to my right. So perhaps if could -- I mean, it is in our submission because we'd actually put that concept in the law, and so it's very important that that concept is understood. Perhaps, Chris you would comment on that.

CHRIS NEWTON: I'm gratified at being described as an expert in this area, and I do have some expertise, but however the point I was going to make is that I don't think this is a -- this isn't an esoteric expert argument. This is simply to do with the long term maintenance of a common resource and in that sense this is what we mean by sustainable development, so that we're managing the resource in a way that it can be continued to be used by future generations.

An example of where development would be unsustainable in respect of water resources would be, for instance, where an aquifer is either polluted and so it's unsuitable for future use. Because once an aquifer is polluted it takes an awful long time for it to be come unpolluted, perhaps never. And similarly on some of our coastal aquifers, or adjacent to the coast, if you were to pump down the water for such a degree that salt water was drawn in from the sea, that could again corrupt the aquifer such that it wasn't available for future use. So we do tend to use the term sustainable development to talk about the protection of an asset for the future good of future generations.

20. Treatment of the whole of the Island as a single catchment unit

PHILIP RONDEL: Coming back to what I was on previously. I put two other questions of which have not been answered. Is there sufficient understanding to justify the treatment of the whole of the Island as a single catchment unit?

DR PEACH: I think we can, if I may answer that? I mean I think I've said in my evidence that I view the water resource system on the Island, the shallow water resources, as an integrated system. I mean you could individually divide up separate catchments, all those rivers and so forth, but they'd be very small and I think it operates basically as a whole. So, yes, I think, at the moment, there is (several inaudible words) to treat this (inaudible). It's not a huge island and I think sensibly in order to manage it you can treat it.

21 What is the regulatory principle and mechanism by which applications to

abstract will be determined?

PHILIP RONDEL: Right. And the second question, what is the regulatory principle and mechanism by which applications to abstract will be determined?

TERRY WILLIAMS: Well, may I attend to deal with that, Chairman? May I please refer the committee to Article 16 of the Bill? That sets out the procedure which the committee must follow when receiving an application for the licence by individuals, and the committee would be required as a matter of law to take into account all relevant considerations. Find all relevant considerations, as I'm sure the panel will appreciate, that of course is all relevant to the principles and purposes of the law, i.e. it is a water resources law. So anything that falls within the ambit of that broad framework, as set out indeed in Article 4 of the law, which gives the general objectives of the committee, achieving a sustainable development and so on and the protection of water resource on the Island, when a specific application is received then the committee would be required to consider that application within that framework but having regard to the factors laid out in Article 16.

I don't know whether that is sufficient for Deputy Rondel, if not I'll come back.

PHILIP RONDEL: I'll give it some thought. (several inaudible words) digesting it whilst another question is being put.

22. Effect of climate change on water resources

GERARD BAUDAINS: In C11(g) of page 6, it is suggested that global warming will have a negative effect. But could I ask how the committee believes that -- yes, it is suggested that global warming will have a negative effect, could I ask how the committee believes a climate change will affect both surface and underground water supplies and has the effect on Jersey be quantified?

CHRIS NEWTON: Yeah, I believe the committee will have received a copy of the report on climate change, the British Irish Council study, which was specifically commissioned to look at climate change on a small island scale. Within that I think there is probably quite considerable information that's relevant to water resources in Jersey. We know for instance that the pattern of rainfall is -- the probability is that the pattern of rainfall over the century will change considerably with significantly less summer rainfall, possibly 40% less rainfall than we receive now, that's matched to some degree by more rainfall in the winter. We also know that there will be a rising sea level in that period. So there are a couple of factors that are potentially affecting water resources in the Island. One is the pattern of rainfall, and therefore the availability of water in the summer period for things like crop irrigation, and the like. And there's also the prospect of a rising sea level which in itself may potentially threaten low lying coastal aquifers.

GERARD BAUDAINS: I'm no expert whatsoever on global warming, but it's my belief that the jury was still out with precisely what may occur. I think rising sea levels are generally accepted may happen. But I've heard it said that the continuing melting of the ice cap could in fact make Europe much colder which would then require less water. It may completely change the scenario. Is it not the case that we're guessing as to what may happen here? It may have a positive effect as well as a negative effect.

CHRIS NEWTON: I mean the jury's out in odd places, like the oil lobby of United States believe the jury's out. The consensus of the international panel of scientists who form the international panel on climate change, which is over 1,000 distinguished scientists worldwide, don't feel that the jury is out. They feel there is, and they have stated categorically, they feel that there is discernible evidence of human impact on climate change. We know sea level is rising - is rising, not might do, is rising. Has risen for the last century and it's to do with simply the earth getting warmer and the thermal expansion of the ocean, it just gets bigger as it gets hotter.

We have observed -- we have temperature records which are reproduced in this document for the weather recording stations on Jersey. Places like Maison St Louis which show a sort of constant climb in annual mean temperatures over the last century. I mean the evidence is to me absolutely clear. The issue of the what if's, if you like, are likely to do with how mankind might change its behaviour over the next decades. And the scenarios of climate change basically track back to scenarios of how people -- how countries might change. So basically if humankind gets to grips with the fact that it needs to release less greenhouse gases to the atmosphere, and does something to make that happen, then the consequences for a changed climate are different. If, however, it continues on a business as usual track, sort of using fossil fuels, etc, etc, then you get a different scenario.

23. Is there any certainty about the effects of climate change?

GERARD BAUDAINS: I think you're missing the point. I don't think anybody disagrees with the fact that climate change is taking place. My concern was do we know precisely what it entails? I think the case that's being made is that we will have wetter winters and drier summers. Is that a guess or is that being certain? That's basically what I'm asking.

CHRIS NEWTON: Well it's a probabilistic argument. It's more probable that it will become hotter and warmer and drier than that it won't. The future is the future until it's happened, to state the obvious.

24. Has the need for a water management law been confirmed by recent data?

GERARD BAUDAINS: Could I change the subject and go onto another question? I notice in the material supplied to us that - committee minutes I believe - on 20 March 1995, the Public Service Committee decided the water management law had not been confirmed by data and was strenuously opposed by many sections of the community. Could I ask what significant data has changed since then?

SENATOR OZOUF: I don't know who was a member of that Public Services Committee. I note with interest that Deputy Layzell asked for his dissent to be recorded on that decision. Obviously the committee was ...

GERARD BAUDAINS: It said in the statement it had not been confirmed by data. Well had it or had it not been confirmed by data?

SENATOR OZOUF: If at the time the committee was of the view that data would have suggested that -- I mean, I'm just trying to think what data would they have wanted. Would they have wanted data on the aquifer levels or other sources of water, which has been the dominant theme it seems throughout the last 20 years that the arguments were that if there was an alternative source of water somewhere you wouldn't somehow need the law. I have to say that the questions that we were talking about earlier, and also the contributions and the comments made about the climate change, that still doesn't stop me from having the conclusion that it's absolutely appropriate that we do put in place this book -- this piece of legislation.

And I'm just having a note to say that there's also relevant minutes of 22 - it's the following one - 22 ...

TERRY WILLIAMS: Well, I think this is a matter, sir, that ought to be addressed either by Dr Peach or either President, I'm simply drawing the President's attention, sir, to the attachment to the minute of 22 March 1999, sir, which was a gap of four years. And I think probably does go some way toward addressing the question that has been put.

JEAN LE MAISTRE: Are they actually in our pack?

PHILIP RONDEL: I don't seem to have one of 22 March. I have 20 March but -- and 19 ... No, I don't have 22 March.

SENATOR OZOUF: We got it afterwards, hadn't we? The committee considered on 22 March 1999 a report which was seeking a recommendation to affirm commitment continuing monitoring of groundwater reserves alongside the production of an appropriate law drafting instructions for the time when the committee consider it's appropriate to put forward legislation on water resource management. And the committee accepted that recommendation but also noted that it was reaffirming its commitment to continued monitoring of groundwater reserves.

GERARD BAUDAINS: With respect, you're talking about monitoring and commitment. I'm talking about hard facts. It is stated -- I mean, I presume that the minutes are correct when it actually states that the water management law has not been confirmed by data. Now to me that is a pretty fundamental statement. I'd like to know if it's true and what that data was.

SENATOR OZOUF: Well, I can't speak for the committee at the time. I think I was probably in short trousers then probably still in 1995. But that's ten years ago. The committee at that time, but with one notable dissenting voice, appeared to be at that particular moment not convinced of the need for a water management law based upon data. Is that what you're suggesting?

DR PEACH: May I say something about this report that is being considered? It was a summary report that BGS produced, I think at the time, and I believe the committee was noting the current position with respect to that summary report and reaffirmed its commitment to continue that monitoring and because of the continued nature of the report, so clearly the 1990s, to move to the production of appropriate water resource management law. I think that's what they're saying.

25. Can we be assured that the water management, the draft law, is presently confirmed by data?

GERARD BAUDAINS: Well, obviously, I understand that persons are not familiar with what happened at that date. Can we be assured that the water management, the draft law, is presently confirmed by data?

SENATOR OZOUF: If that's a question designed to sort of conclude that the committee does not have data which suggests alternative supplies, then I think we've justified in our earlier contribution and our earlier discussions, we think a water management law is justified for a number of reasons which we rehearsed the reasons about the fact that the water that is being abstracted from Jersey is relatively young and is being influenced by our activities here. Mr Newton explained to you some of the basis -- some of the scope of the law in terms of what it covers and what it seeks to protect.

I don't know what data they didn't have, but whatever it was I think there are widely held international standards on water protection which justify the putting in place of the legislation. **I'm not sure what data you think they wanted in order to justify a new water management law.**

26. What evidence does the committee have that over-abstraction either does or might exist?

GERARD BAUDAINS: Well, I would have liked to have thought that the law was actually based on an actual need to have the law and that is why we are trying to, as our brief

suggests, we are trying to actually find what underpins it all and what data exists. Could I perhaps - it may help you if I move on to 11(e) of your submission, as a complement to Water Pollution Law 2000 in lowering pollution levels that may be caused by over-abstraction. What evidence does the committee have that over-abstraction either does or might exist?

SENATOR OZOUF: I don't want to go through the justification again. I think we believe that - and the committee believes - from Riley onwards that there is a need to put in place a statutory framework. We can go on and discuss issues of abstraction and levels, etc, perhaps Chris Newton can answer that question, but ...

GERARD BAUDAINS: With respect, you keep making similar statements that you are convinced there is a need. But you are not convincing us because you are not answering my questions.

27. Reasons for the Law

SENATOR OZOUF: Well, let me attempt to restate. I thought we'd gone through this. **The reasons why we believe that it's appropriate to put in place a statutory framework is for the overall monitoring and conservation, both in terms of quality and quantity of our water resource for the overall public good. These are accepted principles everywhere else in the world. 120 other countries around the world have put similar statutory frameworks in place and I think there's going to have to be an extraordinary set of circumstances which are going to lead me to the conclusion that we somehow are different.**

GERARD BAUDAINS: With respect, what you are suggesting is completely different from the aims of the law. If I may briefly take some extractions from that? Provide for the proper allocation and caring of this valuable resource. To protect existing abstracting impounding rights, which clearly it doesn't. To complement the water pollution laws, as I've just read, in lowering pollution levels. To allow for the long term integrated sustainable approach to the management of Jersey water resources. What we are trying to do is get behind that and find the reasons for that.

SENATOR OZOUF: But I would have - forgive me - but they seem to be one level down from what I was trying to explain. They're all entirely virtuous and necessary statements of fundamental principle accepted around the world, why are we any different? I'm not sure -- are you attempting to identify the fact that we have special circumstances which mean we don't have to do all those things?

GERARD BAUDAINS: No, I'm simply trying to find the evidence which -- all I'm being told is that other

people do it and the committee believes there is a need for it.

SENATOR OZOUF: Well, the Riley Committee onwards believed it was necessary. But maybe Mr Newton --

28. Public Services Committee's reaffirmation in 1999 of the need for a Water Management Law - what new data allowed the Committee to reach this conclusion?

TERRY WILLIAMS: Sir, as an entire layman in these matters, sir, may I just try and assist and deal with your question directly? On 20 March 1995, as you quite rightly cite, sir, the committee at that time took the view that it had to concentrate on what pollution legislation, wasn't entirely convinced, as you say, vis-a-vis the data in relation to water resources. I mean I think that is a correct statement and position as at March 1995. What I was endeavouring to assist the panel with was to refer the panel to the minute and act of the committee four years later, that is to say on 22 March 1999, and there the committee had the benefit of an additional four years of data from BGS. And in the light of that additional data the committee then reaffirmed its original decision of 1993 to press ahead with the water resources law. That is my understanding of the position, sir. I can't elaborate on that.

JEAN LE MAISTRE: Okay, I think that is very important. Could we then be told what the changes were or what that gave by way of evidence in 1999 which enabled them to make that statement? So presumably we're looking -- it seems to me that, you know, that nobody I don't think is necessarily questioning some aspects of law. The question is a matter of degree as to at what point the law triggers for what purpose to safeguard the public good. You know, it's that kind of ... Now are there specific areas which would require a greater touch than others which require a light touch?

So the question here that I read in March 1995 was the difference between the recharge and the abstraction which suggests it were imbalanced. Now it could be that by 1999 there was evidence that actually the balance was not correct and that it was going in the other way.

DR PEACH: May I make a comment about that? And this is from memory so I'm -- the data might be not quite right. During the 1990s, it was the early 1990s, there was a reaction to the (several inaudible words) and some studies were carried out. It became clear that more studies were needed and the (overspeaking) --

JEAN LE MAISTRE: To achieve what?

DR PEACH: To know more precisely what resources were, to quantify resources. And I can't remember the date because I wasn't around at the time, but an experimental catchment was set up, (inaudible) catchment - perhaps you could

advise me of the dates on that?

GERRY JACKSON: Mid to late 1990s.

DR PEACH: Mid to late 1990s, and I think that's the different evidence, between 1995 and 1999 was setting up an instrumentive catchment to measure rainfall, to measure the (several inaudible words) stream, to get a better handle on the amount of recharge. A report from that work was produced by (inaudible) which was (several inaudible words) which is by the States. And that gave more confidence to the idea that we were right on the edge. You know, something goes wrong then we will affect -- that blowing the streams would affect the ability of bore holes to abstract water but, in fact, as a result of lessening of (inaudible) around the streams will affect the environment as well as the water supply. I think that was the conclusion from it. I'm sorry I can't be more precise.

29 **Trinity catchment study**

JEAN LE MAISTRE: No, no. I think that's very helpful. And I don't want to put words in your mouth but would you therefore agree that the model around the Trinity measurement was therefore used as being atypical of (overspeaking) --

DR PEACH: Yes, it was. It was extrapolated to look at the whole Island and look at the resources of the whole Island. To be frank there is still error in the measurements and in that extrapolation but it was much, much better than having none at all, which was the situation in 199, I suppose.

30 **Change in recharge information following Trinity catchment study?**

PHILIP RONDEL: In 1995, BGS in fact made allowance on -- they took it up to 100% picture. In 1998 report they only take a 50% picture, is that correct?

DR PEACH: I'm not quite sure what you mean.

PHILIP RONDEL: In 1995, in fact it would probably be better if the question actually came from Dr Sutton.

DR SUTTON: Up to about 1995 an overall recharge information was -- on an average there was about 50 to 60 millimetres recharge (overspeaking) --

DR PEACH: Yes, and it went up to 130.

DR SUTTON: The Trinity catchment study (several inaudible words). But in 1995 the implication was that abstraction and base flow demands were almost in balance with the recharge.

DR PEACH: I don't know of that.

DR SUTTON: But they were very close to 100%. And in 1998 it was about 50%, just under 50%. That's the change in the 1998 report.

DR PEACH: Well, yeah, I mean I can't remember the individual figures in each report and I didn't actually do the work because I didn't work with them at the time, asked my

opinion subsequently. So I couldn't comment on the veracity of that, whether you're telling me what the report said or ...

I mean the issue was is the confirmation or a better confirmation of the quantities and still (several inaudible words) superlative (overspeaking)?

31. Is it fair to extrapolate Trinity catchment information to whole of the Island?

JEAN LE MAISTRE: One of the tasks that the scrutiny panels are faced with is to try to base comments and other matters on evidence. That is one of the strong points of scrutiny. And the question I think that comes out of this particular aspect, and we're looking about at the sort of recharge and abstraction levels, in your opinion would you say that the Trinity point of measurement is fair to be used throughout the Island, bearing in mind that presumably it was undertaken through a bore hole measurement?

DR PEACH: Lots of them took measurement, I mean the flow in the stream. I mean it's an attempt to get a water balance. It was very difficult on an island to get a water balance because you don't know what's lying (several inaudible words).

JEAN LE MAISTRE: No, of course. But presumably the underwater resource, is really what I'm looking at, would have been measured by way of a bore hole or some similar method?

DR PEACH: Yes. And in several other parts of the Island as well.

32. Confirmation by using data from other locations?

JEAN LE MAISTRE: So that was then confirmed, presumably, by using other data from other locations in the Island?

DR PEACH: Yes, I think the important matter here was measurement of the stream flow and base flow separation to establish what was flowing into the stream from groundwater. I think that was the main issue that was being studied. And from that information calculation of a base flow index was calculated. And from that they extrapolated upwards across the whole Island to establish how much groundwater was flowing to the stream.

33. Development of policies to determine licence conditions through data collection as a result of the Law

SENATOR OZOUF: May I just say, I understand the importance that the panel is placing on this data issue in 1995 and 1999, but from the committee's point of view the law puts in

place a statutory framework and there are a number of -- and of course when the law, I hope when the law comes into place, the law will need to be implemented. The ways in which licences will be given will obviously be -- there will be needing to be policies developed over the next few years of exactly what licence conditions and all the rest of it is made.

I would suggest that the data that was collected and that will be collected as a result of this law will influence the way in which the law is actually managed and the way the licence conditions are (inaudible), maybe a scrutiny panel in future if the law comes into place that will want to scrutinize the policies by which the Environment and Public Services Committee will be issuing licences. The data itself is more about how, not whether or not the law is actually brought into force. At the moment we're not proposing any -- we're proposing frameworks within the law which the committee will have regard to in the execution of its responsibilities under the law, and data is very relevant to how those policies will be pursued, not whether --

34. Need to know supporting evidence prior to the draft Law in order to determine whether or not it is necessary.

GERARD BAUDAINS: Excuse me, Senator, with respect, you are wrong. The scrutiny project outline which obviously you would have had a copy, our objectives are 1) to establish whether there is a real need for the draft law; and 2) to examine the supporting evidence for the draft law; and three other ones as well. Terms of reference, the second one, to consider the evidence supporting the rationale for the draft laws stated with objective. We need to know the data to know -- in order to be able to come to a conclusion as to whether the draft law is either necessary or appropriate. So we are starting at the beginning.

SENATOR OZOUF: And my beginning point, as set in my reading of this, is right. And the fact that there's a debate about levels of groundwater and abstraction and whether or not there is a relationship, a percentage relationship, about what one is taking in the intervening years is relevant and will be relevant to the extent that the way this law will be implemented.

35. Recent evidence undermines the rational for the Law

GERARD BAUDAINS: But it would appear, as I said when I started, that the law - and I think we all agree - basically follows the recommendations of the Riley report. But the Riley report started out by, as it quite clearly states, under the impression the

groundwater resources were being depleted faster than they are being replenished. Now if that is the case then clearly everything is as was and we need -- the basis to the law is clearly robust.

If, in fact, new evidence has come to light which suggests the groundwater resources are not being depleted faster than is being replenished then the need to have the law may not be so robust. We need to get to the bottom of those facts. I still haven't had my question answered as whether over abstraction exists today, whether (several inaudible words) believes or not.

36. Does over-abstraction exist today? (Renewed question)

SENATOR OZOUF: You're absolutely entitled to challenge us and to challenge the committee's experts in relation to the issue of over abstraction or whatever. What I would also want to tell you is that whilst abstraction levels, plus or minus, are relevant, I would also draw your attention to international precedent in terms of a basic requirement, even if it were (overspeaking) --

GERARD BAUDAINS: With respect we'll get to the international issues later if we have time. I take it you do not wish to answer that question because I've now put it, I think, three times.

SENATOR OZOUF: Sorry, would you just restate your question?

37. What evidence does the committee have that over abstraction exists? - Saline intrusion

GERARD BAUDAINS: What evidence does the committee have that over abstraction exists?

DR PEACH: I think there's some evidence that there is saline intrusion in Grouville Bay. I'm not sure about the other bays in the coastal aquifers. And there is some evidence that saline intruding under the land.

Clearly if you allow -- bearing in mind we don't know where all the abstraction is and that's one of the issues really. Because if we did we'd know whether there was a likelihood to be -- over abstraction may not -- coastal over abstraction, for instance, may not involve the total abstraction of groundwater exceeding the total recharge. It may be that because it's near the coast, it's lowering the water table near the coast can draw up or inward the nearby saline water in the shallow aquifers there.

JEAN LE MAISTRE: Is it possible for us to have this information at some point? Or is it solely the fact that we have -- I mean I think it is important because it does obviously underpin a lot of the work that has been going on.

DR PEACH: I'm not aware of that, sir. But I'm sure there is (overspeaking).

JEAN LE MAISTRE: If one could suggest that -- this is a training process for scrutineers as well as for those participating, but there has been a considerable question mark about

new legislation coming into the Island and the feeling that actually we ought to be rolling back the legislative framework of the Island in certain respects. Now it could be, and it may be that this is entirely appropriate, but we need to be able -- if we're going to do our job properly as a scrutiny panel to actually understand the things that underpin the conclusions to which the committee has come to.

Now I think it's only fair for these questions to be asked and if there is evidence, there is hard fact, which demonstrates why this conclusion has been reached. If it is an assumption, and there's a lot of difference, and in fairness in many of the reports which we have gone through which have been submitted from different directions, there's a lot of wording which says it is assumed that, you know. And so some of it -- maybe that's all we'll get but I think it's worth asking the question.

38. Limited knowledge of amounts of abstraction

DR PEACH: In terms of the amount of data, yes, I mean, you're correct in the fact that there is limited data. Limited data because there has been limited monitoring. There is very little knowledge of any amount of abstracting, about drawdowns in abstraction wells. There's very little known about variation in (several inaudible words) and it's in the report. Variation, I mean, in the parameterisation and characterisation (inaudible). What's the permeability of the (several inaudible words)? What's the story to go (overspeaking) --

39. Why is there still lack of information after 25 years of monitoring?

JEAN LE MAISTRE: May I stop you there and just ask why it is that, as I understand it, one of the drivers for concern about the sustainability of the aquifer goes right back to the drought of the 1970s? Now why is it that 25 years later, with all the access that you have or that the States have had to bore holes around the Island, you've got some in recent reports for example, why is it that there is still this doubt or lack of information when monitoring clearly has been going on now for quite a number of years? I need to refer back to 1993, certainly there's --

DR PEACH: Yes, no. And there have been regular reports --

JEAN LE MAISTRE: And it goes before that as well.

DR PEACH: -- each year by BGS on water levels and that sort of thing. But that's only one part of the argument. I mean that's looking at the variation of storage within the aquifer and (overspeaking) --

JEAN LE MAISTRE: In relation to the rainfall as well of course.

DR PEACH: Yes. You know, there's some evidence of that. There's some information. What there isn't is information on what is abstracted and where all the wells are, and for that we need to take measurements in terms of flow for irrigation or for

industrial supply or whatever and that -- you therefore privately own and so forth. And there's no mechanism for getting that information.

40. Conflicting statements on Saline intrusion

GERARD BAUDAINS: To the first point could I -- have to ask Dr Peach because there is some confusion in my mind. Dr Peach just mentioned the possibility of saline intrusion to pumping near the coast. Looking at the BGS 1998 report on page 14 there is a statement which says,

"There is no evidence for increasing salinity resulting from pumping induced saline intrusion"

Have you new information which ...?

DR PEACH: No. I was under the impression that St Ouen's Bay there was some evidence.

GERARD BAUDAINS: I have to say, having read the reports, there are conflicting statements. In some places it says there are saline intrusion, in other places it says there is no evidence. This is why I'm having difficulty understanding what the exact situation is, and why we're asking for the evidence which supports this law because what we're getting is mixed signals.

GERRY JACKSON: There is some evidence of saline intrusion, both on the south east coast, a couple of bore holes, and also the bore hole in Coronation Park. It's not major intrusion, it's the chloride levels in those bores are about twice the background on another bore. So there's some evidence that some seawater has got into those low lying areas.

JEAN LE MAISTRE: Sorry, just to pick up on that. Over what period of time have those records been kept?

GERRY JACKSON: They've been kept now for -- the Water Resources Section came into being in 1998 but certainly we have records before that. It appears to be stable. The saline intrusion at the moment appears to be stable. It's not increasing on those bores.

GERARD BAUDAINS: To me it is a critical issue. It's saying there is saline intrusion and then the aquifer could be under stress. If there is no saline intrusion it may not be under stress. It is really, to my knowledge, it is really the dividing line which is why I really want to understand this properly, whether there is saline intrusion as a result of whether it is pump induced or whether it is in some way naturally occurring. I think the difference is critical.

41. Over-abstraction from different viewpoints - a matter of distribution

CHRIS NEWTON: I just wanted to try and deal with this issue of over abstraction which I've been sort of pondering on since you raised it so many times. It strikes me that one of

the issues that you have to deal with here is conceptual because it's to do with in whose view is something over abstracted, which means you can contemplate a situation where there seems to be enough water to meet a particular use but that use basically stops somebody else from using it.

So if, for instance, you're interested in the flora and fauna of the stream then your view is different to if you're a potato farmer. So if you're a potato farmer and you dam the stream and get all the water you possibly want then, in your view, there's not a problem with over abstraction because you've got all the water and it's on your field. If you are the flora and fauna who live downstream of the impoundment then in your view, yes, the stream has been over abstracted because somebody has just taken all the water that you were going to live in.

And similarly if you're thinking about bore holes, where you might have three or four bore holes in a neighbourhood and it seems to be in balance, they're not taking more than the recharge, somebody else comes along, a new chap buys the property, whacks in a new bore hole, pumps it a bit harder than all the rest and everybody else loses a bit of their water. They might still not be -- it's to do with distribution rather than absolutes.

And my final example would be when the water company is in a difficult summer period and reservoir levels are lower than they would like them to be and they're talking -- well, they are implementing controls on uses of water in supply through hose pipe bans and the like, at the same time you probably have agricultural abstractions going on from the streams feeding the reservoir. So at a time when it would be helpful to have some control processes to bolster the stocks of the reservoir, abstractions are still taking place. Which, in my view, would fall in the category of over abstraction.

I'm trying to discriminate between this absolute of how much rain is there and do we use it all, to put it crudely, and the distribution of that water resource between the many uses.

42. Any other data sources besides BGS eg Well drillers

GERARD BAUDAINS: Could I now change tack? I'm mindful of the fact that we're running short on time, in A5 of the committee's submission it states that both the States, when they decided on the water law was probably necessary, and the Committee placed reliance on the technical advice from BGS, it would appear that the committee is relying solely on BGS's conclusions. Have any other sources of data been taken on board such as the Well Drillers I'm thinking, who obviously have extensive data records on geography and water flows and depth at which water is found, and all that?

CHRIS NEWTON: Well, I mean, we make no apologies for relying on the technical evidence of British Geological Survey, they are the most well respected professional body in this area, and I think it would be foolish for us to regard their advice as anything other than excellent. The Riley report did take evidence from other sources, and other sources of information when they have been made available to us have been looked at.

43. BGS data challenged by Well drillers

GERARD BAUDAINS: Well, I was going to say that it is suggested, as I said before, that the aquifer's only about 25 metres thick and starts roughly 5/10 metres below the surface and the supply rate only averages round about 400 gallons an hour, I think it was, or 5 litres a second. This is the BGS data. They also, as we have heard again this morning, are not aware of any meaningful quantity of water at greater depth. Is the committee aware that none of those statements are supported by the Well Drillers' database?

CHRIS NEWTON: I'm aware that they're not supported by the Well Drillers. I'm not aware of a database of hard evidence that would shed any further light on it.

44. Would Committee's view of the Law be altered if Well drillers data was proven?

JEAN LE MAISTRE: Would your view be perhaps altered if the database did exist which demonstrated that there was significant water below that which is claimed by BGS?

CHRIS NEWTON: Well, if that data exists, and it's true, then it would be a fact. **What I would say is what it doesn't really do is make an impact on what we're proposing with this law. This law deals with the regulation and management of the known reserves of water. And the known reserves of water are those that are in streams, in reservoirs, and in the shallow aquifer that is exploited by the bore holes that exist on the Island, with the existence or otherwise of a deep underground strata. It has no bearing on what we're trying to regulate.**

45. The extent to which that law should go now, in terms of powers, given the information that is available on the amount of resource which is available.

JEAN LE MAISTRE: Well, it does if there is a question of balance. It seems to me that what is coming out is there are two elements here. First is a view which has obviously been put forward, that the law is needed because of the importance of the resource generally and we are out of step with our countries, which we'll talk

about later on, and therefore it makes sense to have a law in any case. Now what I think is being questioned is the extent to which that law should go now, in terms of powers perhaps, given the information that is available on the amount of resource which is available. And how far you control individuals access to their own, at the moment, water?

CHRIS NEWTON: If I can just recap my point there? I mean the existence or otherwise of deep ground water reserves would have no bearing whatsoever on the flow in streams. It would have no bearing whatsoever on the availability of water to the several thousand existing bore hole users who happen to have shallow bore holes. I mean you cannot replenish the water in the stream through deep ground water. You cannot replenish the water in shallow bore holes through deep groundwater. That's the chunk of water that **this law deals with, the known and available reserve.**

46. Deep Groundwater totally different to rainwater?

GERARD BAUDAINS: Is that taking the view that the deeper ground water, if it exists, is actually entirely separate from the shallow aquifer that would be (overspeaking) --

CHRIS NEWTON: I mean it's clearly totally different to rainfall.

47. The Law and deep groundwater.

PHILIP RONDEL: Can I ask a question on that please? It's totally different to rainfall. A bore that maybe go down 600 feet (inaudible) totally different starter, how far down will this law, i.e. that we're proposing, how far down do you propose it to go below ground level? Because we're talking about different levels.

TERRY WILLIAMS: Can I deal with that (overspeaking) questions. I thought, with respect, they'd already dealt with this earlier on when I pointed out to the panel the definition of groundwater, and it's all water below the surface of the ground in the saturation zone. And if I may add to that, how ever deep it may be. It doesn't matter. It doesn't deal with water, whether it be shallow or deep, but from a practical point of view, what Mr Newton has told the panel of course, absolutely sounds vis-à-vis effect on streams and vis-à-vis existing bore holes. But if at some future stage it was identified that there were deeper layers of water then this law would apply in relation to it.

PHILIP RONDEL: Although you mention the word saturation zones below the water table.

48 Is the Law required if there is evidence of deep groundwater resources?

GERARD BAUDAINS: Can I seek clarification here? I'm somewhat confused. I thought, or I understood, that I was told just a few moments ago that if there is deeper water then it would not have any affect on the shallow wells and streams, and that,

and yet we are told that the law would include those as well. If it doesn't have any affect on those why is it being included?

SENATOR OZOUF: Can I attempt to argue this? I'm puzzled by the line of questioning that is being -- I'm not puzzled because I don't think you should be asking it but just puzzled as where it may take us. What we're clearly trying to explain to you is that we believe that there is a requirement for his law, irrespective of if there are deep other sources of water, because we have, we think, 4,000 to 5,000 bore holes -- for a number of reasons, but including the fact that the 4,000 to 5,000 bore holes and wells in the Island that are currently being abstracted from and the streams that are also being used by the Jersey new waterworks company and agriculturalists are being as a matter in hand. That is the thing which is affected.

It's not a question of whether the law should be put in place, it's how the law may well be over the next hundred years evolve. **If other sources of supply were found and if there was this magical stream to pop up and to solve all of the Jersey waterworks problems, and all of the domestic issues and challenges that the agricultural community -- it may change the way in which the law is applied but it doesn't change at all the justification of the law being necessary.**

49. What problem is the Law trying to address? Is there a problem?

GERARD BAUDAINS: Can I come to an even more basic level? You just then mentioned the necessity of the law. That is precisely what we're trying to get to. We are trying to identify what the problem is which the law seeks to address or, in fact, is there a problem? And without getting to the root of the data we're not able to discern whether there is in fact a problem. Or is the law just there because you feel that we should have a law and Europe has a law so we have to have a law. Where is the need?

SENATOR OZOUF: The long title of the law explains very well what this law is attempting to do.

GERARD BAUDAINS: I know perfectly well what it's attempting to do. What we are trying to find is the supporting evidence.

SENATOR OZOUF: But in your questioning you asked what is the problem that is being -- to solve? It is the prevention. It is a number of issues. It is the prevention of a problem and, as equally important point, to actually solving the problem. It is the prevention of having problems in future for the conservation and for the protection of the precious --

GERARD BAUDAINS: Well, then there must be a perceived problem.

SENATOR OZOUF: It is good practice. It is good international --

GERARD BAUDAINS: What do you see the problem to be?

SENATOR OZOUF: Sorry, I was saying to prevent a potential problem and the potential problems, we have experts around the table to actually tell us what those potential problems are.

GERARD BAUDAINS: What are those potential problems?

SENATOR OZOUF: I mean this is pretty fundamental and basic stuff.

JEAN LE MAISTRE: Well, it is. And in fairness we've not had a law for several hundred years and we have managed so far - now that could be the cynic saying that - but in fairness we need to understand why we are now taking that course.

SENATOR OZOUF: The environmental debate has moved on from the relatively uninformed way in which we exploited natural resources a hundred years ago. We now regard sources that are bequeathed by previous generations as precious. And the maintenance, the enhancement of their quality, is something we don't simply go around the world now taking resources, whether they be water, whether they be oil, whether they be carbon or coal, and just not think of the consequences of them.

Also the fact is, is that the evidence that you have before you clearly demonstrates that we are very concerned about the quality of the water. The Riley report clearly said that all the bore holes in Jersey are at risk of pollution. There is the issue, which we haven't spoken about this morning, of nitrates and we want to be alert to the consequences of farming practices and other practices as we go along about our daily/yearly existence in Jersey of the consequences of other activities. The second order affects activities.

GERARD BAUDAINS: Could we hear from your experts, whilst they are here, what the potential problem is? Could we have a definition of the potential problem?

50. Vulnerability to saline intrusion

DR PEACH: Perhaps I can make one or two points on that. The first of which we're trying to -- talking about is shallow -- because we're discussing the shallow aquifer, as we have been all morning, I would say about that aquifer and the streams that are supported, is that the resources therein are very vulnerable. I mean, the issue of saline intrusion is one of vulnerability. I mean there is and there rather is a little bit of evidence of saline intrusion, but it's one of vulnerability.

In other words, if you overexploit, if you over exploit the sands at St.Ouen's Bay or one of the coast lands, you over exploit it and at the moment there's no way of stopping over exploitation. If you've over exploit it, you will ruin it. There's no doubt about that because you suck in the salt. If --

PHILIP RONDEL: Could I stop you on that point, please, because in the BGS report of evidence, it stages on page 5, paragraph 1 that the sands behind St Ouen's bay are vulnerable to seawater inversion. It is inconsistent with the statements of

Robbins and Smedley, BGS, 1998, page 8 that says, "St. Ouen's Bay sands - saline intrusion is not a cause for concern". So that's contrary what you're saying. The land will not be vulnerable.

JEAN LE MAISTRE: Well, of course we're all vulnerable in many ways, but anyhow, you've made the point. I think that --

DR PEACH: They're also from the book. These resources are vulnerable in terms of quantity, as I've said. (overspeaking)

51. **European Water Directives**

DR PEACH: That's a quantity issue causing a quality problem. If you look at the quantity baseline, which supports public supply, all of the supply at the moment, and a large proportion of the base-flow to the streams and it comes from groundwater. If you allow changes and in abstraction ratio amount, and there's nothing to stop people doing it at the moment, then that base-flow is vulnerable. What does that do? That affects public supply, possibly. It affects the ecology of the streams, and 20 years ago we weren't really concerned so much ecology, but times change, and we are now. The States observe European law advancement and implementation. It's not part of Europe but it likes to try and keep up with those things. The Water Framework Directive is forcing the whole of Europe to go down this route of the European Union.

And that route is one of looking at quantitative status, (inaudible) status of waters, and ecological status of rivers. And ecological status of rivers is largely controlled in the summer and early spring months here, by a base-flow from groundwater.

PHILIP RONDEL: Can I come in on that, given the response that's just been given? Given that you've widened the remit of what originally was decided back in the late 1989 -- 1992 --

CHRIS NEWTON: We don't --

PHILIP RONDEL: You have because you've included flora and fauna -- (overspeaking). You've added, you've added to it.

CHRIS NEWTON: Absolutely not.

PHILIP RONDEL: If I may finish.

CHRIS NEWTON: Sorry, I mean you've -- sorry --

PHILIP RONDEL: Let me finish.

CHRIS NEWTON: You've made the point --

PHILIP RONDEL: Excuse me, would you please let me finish?

JEAN LE MAISTRE: Given the question -- give him time to finish the question and then -

PHILIP RONDEL: Why has there been no publicised retraction or amendment of the pre-1996 published reviews of extreme resource stress and the imminent collapse?

CHRIS NEWTON: Have you finished now?
PHILIP RONDEL: I have finished now, yes.
CHRIS NEWTON: I think we'd like to address your first point about the origin or otherwise of the aspects to do with conservation.

52. Addition of conservation aspects to the rational for the Law

TERRY WILLIAMS: Right, sir. This is a slightly long-winded explanation, so bear with me. We have three sets of instructions or drafting instructions here in Jersey. I didn't realise time had gone on so much, sir. But my first set of instructions, which the committee approved of in 1993, dated 27 September 1993, they are the green version. They were for combined water pollution/water resources law. Then, as we've heard already, the committee made a decision to concentrate its efforts on a water pollution law and they're dated the 20 - sorry, 19 - December 1995 and they switch from green to blue, certainly because we're talking mainly about water. And then, subsequently, came the decision after the enactment by the states in the water pollution law in the year 2000. The committee then issued fresh instructions to law draftsmen to produce a water resources law. There we see, sir, on the 26th of January 2001. Now, to deal specifically with Deputy Rondel's point, I can if necessary, sir - but I hope it won't be necessary, and I'm sure it won't - I could, sir, turn and read to you the relevant provisions in the original set of instructions. And interestingly enough, sir, they're all numbered 4 because the numbering system, as it turned out, before we switched around, has never actually changed in this respect. So, if you were to compare the current bills, sir, for the draft water resources law, you would find in article 4 that it mirrors absolutely the original set of instructions. Now this original set dealt in terms with flora and fauna. And indeed, when we come the current set of instructions in 2001, they even elaborate slightly further by referring to amenity, recreational purposes, sustainable development, flora and fauna.

PHILIP RONDEL: Does it mention it in the Riley report?

MALE SPEAKER: No, it does not.

54. Expansion of long title of Law: Addition of 'habitat' in response to consultation

TERRY WILLIAMS: I haven't quite finished answering your question. If you bear with me, I've a little olive just to pass your way. The original set of instructions, sir, did not deal with the word habitat. However, during the consultation stage on the bill last summer, one of the consultees made reference that the bill should deal --

should mention the word habitat.

Now, it had been the original people who had been instructing the team, that flora and fauna, which was mentioned in 1993, was an all-embracing term and would include their habitat, sir. Emphasising the word 'their' habitat.

But, having discussed it with the law draftsmen last year, in the light of the point made by a consultee, we decided that we would in fact incorporate the word habitat into the bill, for the first time.

Now, we even went further. Again on the view of the law draftsmen that we would actually expand the long title, otherwise known as the preamble, to make reference to these matters, so that people were clearly aware the law covered, not only the obvious things that it would cover, but would also cover flora and fauna and their habitats. So, not only was it in the bill originally, as part of the original policy, but it is actually there now, sir, up front. I hope that deals with the question.

53. Why has there been no publicised retraction or amendment of the pre-1996 published reviews of extreme resource stress and the imminent collapse?

PHILIP RONDEL: Well, only to a point because I know - and I know Deputy Duhamel's wanted to come in - but originally we went back, as I say to the Guthrie and John Riley reports, and that's where my question came from. And the other reports have come up since then and have been picked up and things have been added, but originally - pre-1996 - there was reference to stress and imminent collapse in reports.

Now, that is no longer mentioned.

TERRY WILLIAMS: I don't think that's a matter I can answer, because you you've shifted your ground now. You're talking now about the reports. I was talking about the bill. The bill has referred to flora and fauna, from day one.

54. Internationally accepted safeguards

SENATOR OZOUF: May I say I've just come on as President of the committee. I think I am frankly surprised and having just taken over this responsibility, and looking back at the whole history of this since 1996, it is somewhat of an embarrassment for Jersey, frankly, that we do not have appropriate internationally accepted safeguards in place for our water resource for all of the reasons we've been discussing, but not least of which the protection of the flora and fauna of the island.

And I'm disappointed -- I will be disappointed to learn of any view from any States' members that we should not be pursuing this line. I certainly can see a clear set of reasons for the background of this. I can clearly see that flora and

fauna argument, from the beginning, and I think the previous committee was absolutely right, and to put that up front now, in the preamble to set the whole of the background of the reasons for the justification for this law.

GERARD BAUDAINS: Could I come in there and say --

SENATOR LE MAISTRE: Just keep your hand up. He was waiting quite awhile.

55. Alternative Definitions of saturation zone and groundwater?

ROB DUHAMEL: Sir, thank you. A view was expressed by two persons that the law would apply to all ground water, irrespective of how deep that water supply was. In actually the wording of the law, groundwater is stated within the introductory provisions, part 1, where we define our terms,

“To mean water that’s below the surface of the ground in the saturation zone and in direct contact with ground or in the subsoil”

Now, bearing in mind that there is perhaps an uncertain state of knowledge as to whether or not there’s one saturation zone or several saturation zones if you go down deep enough, should not the legislation within the definitions actually refer to the saturation zone, which BGS have determined to be this narrow skin which goes down 10, 15 or 25 meters or whatever? And if indeed -- or rather if it is intended that it should actually extend to other discrete supplies in terms of saturations zones, should not those definitions have been worded differently?

TERRY WILLIAMS: I think my reaction to that, sir, is that if that were to be your recommendation in this panel, then I’m sure that the instructing team would be very happy to consider it.

ROB DUHAMEL: Right, but it wasn’t specifically the intention to include it from the outset because the state of knowledge perhaps is uncertain.

TERRY WILLIAMS: It’s not sufficient for me to nod my head but the answer is yes.

DR PEACH: But can I make a comment on that?

TERRY WILLIAMS: The saturation?

DR PEACH: The saturated zone. There may be -- there are circumstances in hydrogeology where there are several aquifers. However, one of them could be separated by aqua flows or aqua towers, areas of much lower permeability. We are not suggesting here. No, but we’re not suggesting that we go from the zone saturated into one of unsaturation; that would most unlikely, in my experience. But we are suggesting that beneath our skin, if you like - I’ll refer to it as a thin skin - this superficial -- this high level aquifer -- then beneath that there is a zone of very low permeability. It doesn’t mean that the rock isn’t saturated; it’s just that you can’t exploit it for the groundwater.

ROB DUHAMEL: So --

DR PEACH: So in terms of saturation.

ROB DUHAMEL: No, I understand that. So, the general impression then, is there an intention under this law to actually have the groundwater definition extended to all waters that lie below the surface of the earth, down to the centre of the earth, at which your ownership presumably passes to the person on the other side of the planet?

SENATOR OZOUF: If we were -- if the committee were advised that somehow the latest advice were that we were not covering everything, which is not the advice that we had, we would change it. The clear intention of the law is to cover everything below the ground. And I'm not advised and maybe, David, you would assist the panel on whether or not you believe that your advice that there is anything but entire and complete coverage.

DAVID HULL: No, I can't do that. I can't do that. It's a scientific question whether or not saturation zone includes deeper levels. What I would do in those circumstances is take your further instructions, and review the definition and see whether it needed to be.

SENATOR OZOUF: Yeah, but the wording at present refers to a saturation zone as defined by BGS, so presumably when you did the original law instructions, you were of a state of knowledge which limited yourself to one particular zone, not several.

DAVID HULL: It's not 'a'. It's 'the' saturated zone.

SENATOR OZOUF: The is the page.

DAVID HULL: That's different from 'a' saturation zone. I'm not a scientist but presumably 'the' is more.

ROB DUHAMEL: (several inaudible words)

DAVID HULL: 'The' is clearer than 'a' if one ...

SENATOR OZOUF: No, 'the' refers -- no, go on --

DAVID HULL: With respect, the effect of the draft is that it contemplates one.

SENATOR OZOUF: One, that's right.

DAVID HULL: If it's a matter of fact there's more than one, then I need to take further instructions and clarify it further. (overspeaking)

PHILIP RONDEL: For the Chair, if I may, it's going to be very difficult for the person who's transcribing these minutes if everybody's talking at once and that's why I keep on asking because I know there's a problem with hearing and you have to talk in the microphone but please, if we only talk through the Chair, one of us talk at a time because the poor person on the other end --

JEAN LE MAISTRE: Very difficult for the transcriber to come through. Before we go any further, I was wondering though whether we could take advantage of Dr Sutton being with us today, if he has any questions at this stage.

SENATOR OZOUF: Chair, may I just say one thing? I've managed to get a postponement to my next interrogation - sorry - hearing. I can be with you until 20 past if that's helpful, but I must leave at 20 past. Thank you.
Dr Sutton, is there anything that you'd like to ask at this stage?

56. Is the sort of complex and potentially punitive legislation, the correct route to take towards the measurement and protection against potential in the future?

DR SUTTON: We've heard a range of views towards groundwater resources, but there will always be a margin of uncertainty as to what they are and there does seem to be some divergence as to whether we're looking at something to protect the resource for the future and provide the means to that intention. If we're moving towards protection and measurement, it may be a bit inappropriate. Is the sort of complex and potentially punitive legislation, the correct route to take towards the measurement and protection against potential in the future?

JEAN LE MAISTRE: That's a political question rather than --

SENATOR OZOUF: You suggest that the legislation is both complex and punitive, and I would need to perhaps understand why there is a view that it is both complex and punitive. It seeks to meet the objectives that we've been discussing, but what is the punitive nature?

JEAN LE MAISTRE: Well, it has considerable powers, that's for sure, and some of those powers, if I interpret this correctly, are linked in to the possibilities of what could happen in the future role which are unknown at the moment but which could happen.

SENATOR OZOUF: Obviously the committee -- the successive committees has been on having an eye to legislation in place in other places, and I'm advised that the piece of legislation that is before you, is certainly in line with other EU States, and indeed, beyond. We don't also accept that the legislation is complex because, in fact, through the process of consultation, the 3m³ per day is a reflection of a concentration on a target by the committee, although on extractions for commercial use.

And indeed, we know -- we think we know how many bore holes there are in the island roughly - 4,000 to 5,000 - not quite sure, but we certainly believe that the vast majority of them are of the below 3m³, and the full force of the legislation is designed to target the ones that are above 3m³.

And indeed, the importance of that 3m³ - not by order; it's not something that's actually been made by order of the committee - it is actually in the statute, and can only be changed by States regulation. So, there is a continued considerable removal of the vast majority of that attraction in the island.

TERRY WILLIAMS: Mr Chairman, let me -- may I just add a rider to that? In terms of the powers

that the law seeks to take and in terms of what you referred to as a complexity, may I please remind the panel, that Deputy Baudains did correctly accept that this draft law follows appendix 2 to the Riley report. And that appendix 2 was endorsed by the States six months later.

GERARD BAUDAINS: Could I come in there and just add a rider to that? It would seem that the States took the decision they did at that time, on the basis of the information that they had at that time, which has now been superseded by fresh information, which, as I understand, the information at that time was that the groundwater resources were being depleted faster than they were being replenished. That view is not maintained today.

SENATOR OZOUF: I think we could be here all day trying to --

57. Is the committee satisfied that sufficient research has been undertaken to make this law desirable and necessary? Does water exist on Les Ecrehous?

GERARD BAUDAINS: Yes, we could, but I was saying it as a rider as to what was said earlier. My question now is a political one. Is the committee satisfied that sufficient research has been undertaken to make this law desirable and necessary, and I would follow that with the comment that is it not the case that the water balance, as we understand it, could be affected by research which not been undertaken? I refer to the -- and I'd like to know why that research has not been undertaken. I'm thinking of looking to see if deep water exists and whether water exists on the Ecrehous or not, which as Dr Robbins of BGS did once state that if that was found, it would significantly influence the debate.

SENATOR OZOUF: Well, I can speak for my own position as president of Environment and Public Services to say that I am totally persuaded on whether or not the legislation is required. In fact, I think, the legislation is more required than ever, with the advancement of environmental concerns, and the population pressures that the island has seen, etc.

And I think it is - and I state quite publicly that I think it is - somewhat of an embarrassment that the States of Jersey and the successive Public Services committee, have not implemented the recommendations that were clearly set out in -- I've mentioned Riley on a number of occasions but we go back to Guthrie as well, where there was clearly a set of concerns, which needed to be translated into legislation.

I am absolutely persuaded that the legislation will also provide us, with a great deal of information, of which we currently are guessing about, on the water resource within the island. And indeed, will assist us in better conserving, and

better protecting, and putting in place better standards for the protection of the island's natural habit, flora and fauna, etc.

As it relates to the question of whether or not we should go and sink a great big bore hole on the Ecrehous or wherever, I am advised that that is a considerably expensive process. I certainly have no intention of going to ask my fellow presidents for resources in order to go and carry out investigations there.

If there is evidence that there is water, at significant depths below the Ecrehous or indeed Jersey or anywhere else, then presumably somebody with private sector funding will make that decision, of whether or not it is worth the risk to actually pursue that. And obviously, the environment committee, wearing its planning hat, and wearing its environmental hat, will make an assessment of whether or not it is acceptable.

Certainly on the eve of a debate when the States will consider designation of the Ecrehous as a Ramsar site, certainly I would need to have compelling evidence shown before my committee, that it's an acceptable situation to do the environmental damage that will inevitably flow from the sinking of a great big bore hole on the Ecrehous.

GERARD BAUDAINS: May I just say that a great big -- for want of a better name -- a great bore hole of four inches in diameter, doesn't really make much of an environmental impact.

SENATOR OZOUF: But at the time, because it is the rigging and the drilling, and the --

GERARD BAUDAINS: With respect, Mr President, we take that away after the hole is built. But the issue you raised about the issue of finance - are you aware that at the time the offer was made by the well drillers, to drill the hole, free of charge? But the committee were unable to supply the transport, which I believe was offered by the TA but for some reason refused.

SENATOR OZOUF: Well, I'm aware of all of the things that you've just mentioned.

GERARD BAUDAINS: The reason I raise that is because if the man from BGS, at that time Dr Robbins, suggested, it would significantly influence the debate, and clearly it could be important, and that then is a piece of research which has not been carried out, which perhaps should be.

SENATOR OZOUF: Research and development is something that I certainly would be willing too pursue in lots of different areas within my committees, and it's a case of allocating the scarce resources of cash, in terms of deciding where we would put that resource. I have to say that I'm coming to the conclusion that even if we were to sink a bore hole on the Ecrehous and find that it had a magical source of water, I don't think it would change my committees' strong desire and intention to bring forward to the assembly the water resources law.

It's not going to change. It's not going to change whether or not we bring forward this piece of legislation. It may, if it were to be the case, it may well

change the way that the water resources section may implement, may manage the law in the next few years; but only to a very minor extent. I can't see that the results of a bore hole on the Ecrehous are going to change the approach that the committee has, for all of the reasons that we've been thrashing out this morning.

GERARD BAUDAINS: I think we were rather hoping that we would find evidence for the need of a law, that was after all, in our remit and it seems to me that any evidence, which basically supports, or otherwise, the law, would be most useful for us in making our determination.

58. Law required irrespective of discovery of evidence of alternative water resources.

SENATOR OZOUF: I think what I would say in conclusion to this point, is that, if you're looking for evidence that -- evidence from the committee -- that we don't need the law, then, in terms of an alternative source of water, then I fully accept you're not going to find it. That does not change the fundamental principles of why this piece of legislation is necessary, and follows international best practice for all the reasons we've been discussing.

JEAN LE MAISTRE: Can I just -- so that we have it for the record, what you're saying, that irrespective of the amount of water available currently, that you would want the law to be introduced?

SENATOR OZOUF: I think there are compelling reasons for introduction of legislation to pursue the objectives set out clearly in the preamble to the law, that this law is required, and indeed, necessary for Jersey. Jersey has a proud record of implementing environmental best practice and environmental legislation, to secure the world in which we live. And certainly, I think it is a requirement for the States of Jersey to accept putting in place such a statutory framework.

59. Finite water resource

CHRIS NEWTON: Can I just intervene as well to say that it's not a -- in my view, the question of reserves and resources is pretty straightforward. It's finite. It's to do with the amount of rainfall that hits this small block sitting in the middle of the sea. That is the totality of the resource that's available to us. So, it's not a question of there being unlimited resources. There is a finite water resource that this island is able to exploit.

At the risk of being sort of unnecessarily controversial, I do think it's a complete red herring to sort of propose the fact that there might -- that we ought to research and there might be some other -- contrary to all know science and

hydrological principals, that there might be some other reserve somewhere else that we're just not bothering to find.

SENATOR OZOUF: Well, even it did -- even if it were there, would we not be putting in place arrangements to safeguard and protect the resource that we know that we're extracting from?

PHILIP RONDEL: Can I come in, Mr Chairman?

SENATOR OZOUF: Yes.

60

Cost of putting the draft Law in place

PHILIP RONDEL: I'm also a person who wants to protect the environment, but sometimes we have to think about the cost. Not any of the cost of putting this law together, but the cost of actually maintaining the department in that particular area - the environmental department. At the end of the day, what is the cost going to be to the island, other than -- because I don't believe we'll have environmental damage if we don't have this law -- what will the cost be to the island, by having to put this law in place, then maintaining it with all the officers and the bureaucracy that will go with it? There obviously is a cost, and as I have already said, I am partly green, for want of a better word, but do we really need this law just to say we've signed up because someone in the EU has said so?

SENATOR OZOUF: No, absolutely not. But the EU and other communities have also come to the conclusion that it's appropriate for governments to pursue the objectives, which are set out in the preamble to the law. And you talk about cost and I'll deal directly with your issues of cost. We've estimated the overall cost of this law to be approximately £120,000 per annum. I think, I hope you would have received information of the breakdown of that, and we think that translating that to a figure of approximately £3 per annum on the average domestic water bill and an average of £50 per licence from the remaining -- because obviously it's Jersey water that is going to be the biggest cost of bearing, approximately £100,000 or £120,000. We think that is a small and necessary cost in order for the States to continue to ensure that our island community gets at the supply of water that it requires.

And I think this is an example of a relatively small expenditure for a potentially long term, absolutely necessary and beneficial outcome. The debate has not -- I'm interested to note that the debate about water has not been a dominant issue in the last ten years - certainly since I've been in the States, in the last four years. That could change, and again, as the world changes, as the island changes in terms of its population and all the rest of it.

PHILIP RONDEL: So, this could be a 'nice to have' law?

61.

20 years delay in bringing forward legislation requested by the States in

1982

SENATOR OZOUF: Oh, it's not a 'nice to have' law, Deputy. It is an absolute fundamental and it is. And I repeat my surprise of arriving in Environment and Public Services and bringing forward legislation that was identified and agreed by the assembly 20 years ago.

I mean, there can't be many States' decisions that have taken more than 20 years to implement, and clearly your line of questioning is suggesting that the States got it wrong, when they considered this in 1982. I don't think they did, and I certainly have no intention of going back to the States and asking them to rescind their decision.

JEAN LE MAISTRE: It is true that the basis has changed.

SENATOR OZOUF: Sorry?

JEAN LE MAISTRE: Is it true that the basis probably has changed from 1982 today?

SENATOR OZOUF: It may well be, but if Major Riley, sadly he is no longer with us, but if I had Major Riley to do me an update report in 2004, I would suggest that Major Riley would repeat all of the recommendations that he made then, and go further, with the benefit of the environmental advice, which we now have. I don't think we had an environmental adviser in 1982, did we?

MALE SPEAKER: 1992.

SENATOR OZOUF: 1992, sorry. I don't think we did. So --

62. Public opinion on the need for the law?

GERARD BAUDAINS: Does not the committee foresee problems in selling to the public a law which will regulate people's ability to use what they consider to be their own water, when the committee is not able to prove that either there is a shortage of water, that we are either over-abstracting or indeed that that situation may occur in the future?

SENATOR OZOUF: The majority of consumers in the island - the majority of the population - get their water supply from the Jersey New Waterworks company and I believe that the Jersey New Waterworks company will be appearing before you and they will no doubt be also enthusiastically but honestly arguing the case for the introduction of a water law. I think it is -- there are conversations that we started at the beginning of the morning's discussions were along the lines of putting in place something which is a balance, which is, yes, eroding people's individual rights but for a greater -- for the good of the general public of the island, for the overall masses of our community.

And I think their target would be -- it would be a problem for me to have to account to the consumers of the Jersey New Waterworks company that we don't put in place a statutory framework, which ensures the long-term supply of

their necessary consumption of water.

63. What would this law actually achieve?

GERARD BAUDAINS: So, apart from the gathering of further information, what would this law actually achieve?

SENATOR OZOUF: Well, we can go back down into the detail. We will do so in detail. It is a multi -- it achieves a number of objectives. It not only provides a gathering of information, which I think is an absolute no-brainer in terms of the requirement, it also provides a statutory framework for the attaching of conditions on a number of circumstances for extraction, but it also deals with all of the other issues of the protections of streams and of reservoirs.

64. Protection of existing borehole users

TERRY WILLIAMS: Mr Chairman, I wondered if you would permit if I was to make an observation in relation to the draft law, dealing specifically with Deputy Baudains' point. You will recall, sir that I previously referred the panel to article 16 dealing with the matters that the committee must take into consideration, as a result of the questioning by Deputy Rondel. If one were to look, specifically, sir, at 16(1)(c), when read in conjunction with 16(2), and I'm sorry to throw these numbers at you, but it is important that when we deal with specific matters, that we do focus on to the relevant provisions in the bill.

Now, this to my mind, sir, and I do have, if I may say so, considerable experience upon the application of this sort of law in other jurisdictions. This is a key element of the draft law for Jersey because the effect of article 16(1)(c) is that it provides an element of protection for existing structures on the island, which under the current regime you do not have.

Only by putting this law in place will existing bore hole extractors have any level of protection. At the moment, in Jersey, there is nothing whatsoever to prevent a person from sinking a bore hole, literally next door, and taking your water away. I was privileged to listen to the evidence that the Solicitor General gave to you, in relation to underground water, and she made the point, that of course, there is no law in relation to subterranean water in Jersey. And therefore there is no level of protection, whatsoever, under your law as it currently stands, and by putting this law in place, I would submit, then by virtue of 16(1)(c) you would be introducing a very important element of protection. Thank you.

65. Conclusion

SENATOR OZOUF: I'm going to have to leave you, and of course the rules of the evidence giving of committees is such that I'm going to have to withdraw with my team. So --

JEAN LE MAISTRE: Who established those rules?

SENATOR OZOUF: Well, those are the rules of the attendance, which you will have identified at the beginning, where you said that it's clearly the president that answers the committee.

JEAN LE MAISTRE: It can be -- it is open we understand from other jurisdictions, for officers to be called.

SENATOR OZOUF: This is the evidence giving of the end of environments' Public Services president, and his team and therefore it is an undividable commodity, I'm afraid.

JEAN LE MAISTRE: That's fine. We would ask you though to return, so that we can look at the law in detail, next Monday at 9.30am?

SENATOR OZOUF: Well, I don't have my diary with me, and it is obviously diary permitting. I will do my very best in order to attend your meeting, but I haven't got my diary in my head. It may well be that that is not a convenient time, and we'll need to work diaries in order to achieve the time possible.

JEAN LE MAISTRE: Well, I think we should make you aware that obviously it is difficult for all of us to fit these things, and we appreciate that. (several inaudible words) But if it's not possible, then it would have to be probably in October.

SENATOR OZOUF: Fine, okay. Thank you for your questioning.

(meeting adjourned)