CORRECTED

REPORT OF PROCEEDINGS BEFORE

GENERAL PURPOSE STANDING COMMITTEE No. 5

INQUIRY INTO SYDNEY WATER'S BIOSOLIDS STRATEGY

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At Sydney on Friday 28 September 2001

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The Committee met at 9.30 a.m.

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PRESENT

The Hon. R. S. L. Jones (Chair)

The Hon. Jan Burnswoods
The Hon. R. H. Colless
The Hon. M. Costa
The Hon. J. H. Jobling
The Hon. M. I. Jones
The Hon. Janelle Saffin

CHAIR: I welcome the media and members of the public to this hearing of General Purpose Standing Committee No. 5 for its inquiry into Sydney Water's Biosolids Strategy. I advise that under Standing Order 252 of the Legislative Council evidence given before the Committee and any documents presented to the Committee that have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any member of such Committee or by any other person. Copies of guidelines governing broadcasting of the proceedings are available from the table by the door.

ALEXANDER WALKER, Managing Director, Sydney Water Corporation, 115-123 Bathurst Street, Sydney, and

JUDI HANSEN, General Manager, Environment and Innovation, Sydney Water Corporation, 115-123 Bathurst Street, Sydney, affirmed and examined:

KIRSTIE JANE ALLEN, Manager, Infrastructure Policy, Premier's Department, Level 37, Governor Macquarie Tower, Farrer Place, Sydney, sworn and examined:

CHAIR: In what capacity are you appearing before the inquiry?

Mr WALKER: As a representative of Sydney Water.

Dr HANSEN: As a representative of Sydney Water.

Ms ALLEN: As former project manager for the North Head biosolids strategy.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr WALKER: I am.

Dr HANSEN: I am.

Ms ALLEN: I am.

CHAIR: If you should consider at any stage during your evidence that in the public interest certain evidence or documents that you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to such a request. However, the Parliament may override that request. I will start with this question: Do you stick by your promise to remove the biosolids trucks from Manly?

Mr WALKER: Before answering that question, Mr Chairman, I seek your approval to read an introductory statement to put the answer in context.

CHAIR: Please go ahead.

Mr WALKER: Mr Chairman, I thank the Committee for allowing Sydney Water to, first, express its viewpoint on the North Head biosolids handling and transport strategy. This will allow us to demonstrate how views from the community, concern for the environment, available technical options and commercial factors have been extensively considered in formulating this strategy. The strategy was developed specifically to address the most appropriate way to manage the handling and transportation of the biosolids produced at the North Head sewage treatment plant.

Biosolids are a resource produced by processing sludge. Sludge is a byproduct of sewage treatment processes. It is not an issue that will go away, it will always be an integral part of wastewater management. Sydney Water welcomes the Committee's interest in this issue. Our thinking as a corporation has changed with the times. We now have greater environmental and community focus. We have come a long way from the days of disposing of tonnes of sludge into our oceans or burning it without much consideration of the environmental consequences. We have given the disposal of sludge and the community and environmental effects much thought. In the last nine years almost 1.4 million tonnes of biosolids have been beneficially reused.

We are not the only ones who have given much thought to the management of water resources. Since 1994 there have been a number of parliamentary inquiries into Sydney Water and its predecessors. A number of those inquiries have touched upon the way we manage sludge. Governments have rightly responded to these inquiries and Sydney Water has been diligent in complying with these directions. Owing to technological advances, sludge no longer needs to be dumped into our environment; it can be safely reused as biosolids. Biosolids are indeed a safe resource. They are currently beneficially reused in agriculture, forestry and horticulture.

Extensive research by New South Wales Agriculture, New South Wales State Forests and the CSIRO has demonstrated that biosolids improve soil structure and its ability to hold water, and greatly improve poor soil conditions without compromising the health of the community, livestock or the environment. Farmers around New

South Wales have consistently used biosolids over the last decade and the demand for biosolids often exceeds supply. In addition to the thriving agricultural market, we also utilise biosolids in land and mine rehabilitation. Community safety is a focus of the strategy. The biosolids will undergo a series of processing steps to ensure that they do not compromise public health when handled or transported. Sydney water has investigated a number of technologies from around the world that produce grade A biosolids product. To date we have found thermal drying is an appropriate technology. The temperatures reached in the process eliminate more pathogens than other technologies. However, we are continuing to look at new technologies as they develop.

Studies by the EPA and New South Wales Agriculture have shown that biosolids have no known adverse impact on community health when used appropriately. The advanced treatments render grade A stability biosolids almost pathogen free. Biosolids can therefore be safely transported without compromising public health. However, to ensure that we are aware of world's best practice, Sydney Water continues to monitor current research on biosolids processing and is abreast of the latest technology and trends from around the world. Sydney Water has invested $13 million in research over the past decade to evaluate the impact of biosolids use in land applications such as agriculture. These studies conducted by New South Wales agriculture, New South Wales State Forests and the CSIR0 have found biosolids to be an efficient and effective slow-release fertiliser that have no known adverse impacts upon the environment, community health or livestock when used appropriately.

Biosolids have been demonstrated to significantly improve crop yields and animal production through the addition of plant nutrients and trace elements and by improving the physical, chemical and biological properties of soils. Sydney Water's operating licence for 1995-2000 required that at least 90 per cent of all captured biosolids be available for beneficial use by 30 June 1996. Our performance in biosolids management and recycling is measured as part of the annual operating licence audit. Over the past five years, we have complied with all licence conditions in relation to biosolids management. We are successfully reusing 98 per cent of this product, thus performing at a higher level than required by our operating licence.

The North Head biosolids handling and transport strategy was developed by Sydney Water to comply with condition 130 of the modified approval to the Northside Storage Tunnel as issued by the Minister for Urban Affairs and Planning on 31 August 1999. To satisfy the requirements of the condition of approval, the strategy examined options to identify appropriate short and long-term solutions for the handling and transportation of biosolids. It also aims to ensure viable and sustainable markets for biosolids while allowing Sydney Water the flexibility to adopt and respond to new technologies. Naturally the strategy was delivered to the Department of Urban Affairs and Planning in accordance with its 31 August 2000 deadline. A copy was also provided to this Committee very shortly thereafter.

Each of the options presented for consultation was chosen following extensive studies on the basis of several criteria. To be considered for implementation, it was necessary for the outcome of each option to be in line with the objectives of the Government's waterways package and Water Plan 21. It also had to be technically feasible, be based on scientific evidence and utilise proven technologies. Options were in line with international and local technology developments and trends in biosolids management, and they were also aligned with Sydney Water's long-term biosolids market objectives and likely trends in regulator and community demands.

The options presented also considered the off-site locations that met the requirements of being close to rail transport and to the northern suburbs ocean outfall system and the southern and western suburbs ocean outfall system. The options for North Head only that were presented for public consultation were: (a) local traffic improvements at North Head; (b) barging of North Head biosolids from Little Manly Cove to White Bay; (c) on-site treatment at North Head sewage treatment plant to reduce the volume of biosolids to be treated; and, (d) transfer of sludge off site by pipeline from North Head to Camellia.

Three additional long-term Biosolid options for Sydney Water's three coastal STPs at North Head, Malabar and Bondi were also presented for public consultation: (e) improvement in treatment levels at all three ocean plants and maintenance of existing biosolids processing; (f) drying biosolids to reduce volumes on site at the North Head and Malabar plants, and sludge transfer by pipeline from Bondi to Malabar; and (g) pipeline from North Head, Bondi and Malabar to Bunnerong. The details and assessment of each of these options are discussed extensively in the North Head STP biosolids handling and transport strategy and our submission to this inquiry, so in the interests of brevity, I will not discuss the pros and cons of each of them now.

In order to ascertain the best options for biosolids management, Sydney Water developed a comprehensive consultation program with State agencies, local government, stakeholders and the community. Input from the community consultation process formed the criteria that were used to evaluate each option to identify a preferred strategy. In 34 formal meetings Sydney Water consulted many community groups, government agencies, local

councils and stakeholders, including the sewage treatment plants' community liaison committees at North Head, Malabar and Bondi. The northside storage tunnel community liaison groups at Manly, Scotts Creek and Hunters Hill were also consulted, as were Sydney Water's corporate and regional customer councils. We have consulted stakeholders in Manly, Parramatta, Bondi, Maroubra, Balmain and Lane Cove, as well as stakeholders from potentially affected areas, including Camellia and La Perouse. We also met with the peak environment non-government organisations.

The comprehensive public consultation process, where approximately 4,000 community members were consulted, provided Sydney Water with qualitative information regarding issues, concerns and priorities of the local community around North Head and the broader community. The consultation process placed great emphasis on face-to-face meetings and workshops to ensure that community inputs were considered in the development of the strategy. In addition to these meetings, Sydney Water initiated a large-scale distribution of information to the community through information booklets, an information telephone line, media coverage, information displays in local shopping centres, resident surveys, holding community meetings and receiving submissions. Additional key inputs from stakeholders and traffic studies were also considered to identify the best biosolids management option.

The methodology involved in assessing the options balanced community, environmental, technical and commercial considerations. As the Committee is aware, Sydney Water has identified on-site treatment at North Head to reduce the volume of biosolids as the option that best balances these four considerations. It is important to convey to the Committee that Sydney Water has conducted sensitivity analyses that gave significantly higher weighting to community considerations over technical, economic and environmental considerations. These sensitivity analyses still identified on-site treatment at North Head to decrease the volume of biosolids as the option that best met community considerations.

At this point I would like to address the matter of off-site treatment of sludge at Camellia. No decisions were taken by the board of directors or the Sydney Water executive management committee to transport sludge via a pipeline in the northside storage tunnel to Camellia for off-site processing. It was an idea that was given serious and active consideration but no decision was ever taken. On 14 May 1999 Sydney Water formally and publicly apologised to the Manly community for incorrectly publicising the intention to install a pipeline to transport sludge to Camellia for off-site treatment.

The North Head site is bounded by ocean and bush, and has a buffer zone of 500 metres to the nearest property. The existing biosolids processing facilities have advanced odour control systems to control odours and meet air quality guidelines. Biosolids are transported in trucks with hydraulically operated top covers that seal on closure, and have fully sealed tailgates. Wherever possible, the new biosolids processing facilities would be housed in the existing biosolids processing buildings or the disused incinerator buildings. The facilities would include state-of-the-art odour control that would enable the strictest international air quality standards to be met.

The proposed on-site processing at North Head will essentially reduce the volume of sludge that would otherwise be transported from the site. This ensures significantly less trucking at North Head. There would only be two to three trucks per day, accounting for less than 1 per cent of total vehicle movements on Darley Road. The proposed on-site processing would also ensure the production of a stabilisation grade A palletised product that can be transported in a fully enclosed tanker-type truck. Accordingly, on-site processing at North Head minimises the impact on the local community and the environment.

We believe that on-site processing at North Head is a more energy efficient, cost-effective and sustainable process, compared to off-site pipeline transfer. There is no need to construct piping through residential areas to transfer sludge to a decentralised location. Accordingly, there is no need to construct pumping stations and use additional energy to transport the heavy sludge away for treatment. There is no need for additional odour release points. There is no risk of a pipe failure. The on-site processing option at North Head is associated with significantly less operational and approval risks as it reduces the risks associated with constructing a new treatment plant and the transportation of sludge.

Sydney Water regards the Manly community as an important stakeholder, and we will not compromise the community's health or local environment. We have invested almost $214 million into the Manly local government area alone in the last decade. These investments include large multimillion dollar capital works, such as the North Head sewage treatment plant and the sewer fix program, but considerable investments have been made to conserve the wetlands, streamwatch initiatives and planting pine trees in the area.

The northside storage tunnel and its Shelly Beach extension will also significantly improve water quality in the harbour. Investigations suggest that Sydney Water's approach to biosolids management ranks as one of the best

in the world. Sydney Water has coupled advanced technology and research with our continued commitment to public health and the environment. The biosolids strategy will ensure that Sydney Water continues to safely convert what was once considered a waste product into a beneficial resource in a way that protects the community and the environment.

CHAIR: I have the minutes of meetings, which were released under freedom of information legislation, held on 19 May 1998 and 22 June 1998. Those meetings were attended by Judi Hansen and I am sure you would be familiar with those meetings. At those meetings you recommended that biosolids processing for the upgraded plants is to be centralised at an off-site location such as Bunnerong. One reason for that, according to whomever wrote the minutes, is that expectations have clearly and publicly established that Sydney Water will process sludge from North Head off site at Camellia and, therefore, it would be reasonable to expect that Sydney Water is seen to be progressing the planning and environmental assessment for off-site treatment.

On 22 June 1998 you once again recommended that in light of the net present value [NPV] of this option of biosolid treatment at Botany, this option is considered reasonable and is recommended. Your final recommendation was that a centralised biosolids processing site in the Botany industrial area, such as Bunnerong, is recommended. That option had an estimated NPV of $550 million. What happened to those recommendations? Why were they jettisoned in the meantime?

Dr HANSEN: That information was presented to the Sydney Water executive at the time. The information was considered and additional studies were requested prior to the executive making a final decision. Since that time, of course, we have done extensive community consultation and some additional technological evaluation which, subsequently, resulted in a different preferred option.

CHAIR: Was it a political decision to jettison those recommendations? Obviously something major happened in that one year, because the decision was changed.

Dr HANSEN: As I said, there was extensive community consultation.

CHAIR: In one year?

Dr HANSEN: Yes.

CHAIR: Between June 1998 and June 1999?

Mr WALKER: That was the period in which there was consultation relating to the northside tunnel project and the provision of a sludge transfer pipeline in that tunnel. I repeat what I said in my statement: There was never a decision taken by either the executive or the board of Sydney Water to provide a sludge transfer pipeline from North Head to a remote site.

CHAIR: Either to Camellia or Bunnerong?

Mr WALKER: That is correct.

CHAIR: One of the reasons given in the two recommendations was that that would fulfil the promise of Sydney Water to remove the biosolids trucks from Manly, and added that it would remove biosolids trucks from Bondi and Malabar too. Sydney Water made that promise to the people of Manly. What happened to that promise?

Mr WALKER: I was not there at the time, so I do not know the exact circumstances, but there was an error. Publicity was given by Sydney Water, in the context of the northside storage tunnel project to various features. A media release at that time stated that one feature that was to be provided was a sludge transfer pipeline. That was in error, it did not reflect any decision taken by the executive or the board. It was not only refuted later in the subsequent inquiries relating to the northside tunnel, but was the subject of an apology to the people of Manly for the fact that that statement was made in a media release. I have referred to that in my statement.

CHAIR: I am aware of that, of course. This had nothing to do with Camellia, it referred to Bunnerong. The idea was to centralise all three at Bunnerong. I am aware of the Camellia option, that land at Camellia was bought, originally, by your predecessors as a treatment site. That does not hold water, in a manner of speaking, because the recommendation is for Bunnerong not Camellia. I wonder if there has been some kind of political interference in the process whereby this recommendation was thrown out and we then had the spurious option of drying the biosolids at Manly, but not at the other two plants evidently, and continued trucking.

The Hon. MICHAEL COSTA: Point of order. It is difficult to go down this path. Could Mr Walker explain the normal processes for decisions being made in Sydney Water.

CHAIR: If you want to ask a question you may do so in a moment, when you will be called.

The Hon. MICHAEL COSTA: Mr Chair, the way this inquiry is being undertaken at the moment is not very fruitful in my mind. Clearly, the status of the document that has been referred to needs to be established.

CHAIR: Do you not have a copy? You should have, it was included in your papers.

The Hon. MICHAEL COSTA: No, I am not talking about the status of the document. From my experience I know that large organisations such as Sydney Water produce reams of documents. Clearly, the most important thing is to understand where that particular document fits into the corporate governance system of the organisation. There is no point in us sitting around and discussing a document that has very little status in the organisation. Mr Walker has made the point that the board and the executive had never approved any of the strategies. I cannot understand this line of questioning.

CHAIR: I am trying to work out why Judi Hansen's recommendation was overturned at some point, and she is here now to answer the question. We have not established why that was overturned.

Mr WALKER: I will repeat what I said in my preliminary statement: The option for a pipeline from North Head, Bondi and Malabar to Bunnerong remained one option which was considered.

CHAIR: Is it still an option?

Mr WALKER: It was one of the options considered during the process of community consultation and evaluation of options in order to develop this strategy, which is the subject of review. The land remains in the ownership of Sydney Water, because it was purchased to provide for that option. The option was seriously considered but, on the basis of all of the criteria, including the community views, it was rejected in favour of on-site treatment and transport.

CHAIR: So Judi Hansen was actually wrong in making that recommendation at that time?

Dr HANSEN: The executive determined that it was not the right one; yet they could not make a decision on the evidence that they had in front of them.

CHAIR: I think you actually made the right decision at that time.

The Hon. MICHAEL COSTA: That is speculative.

The Hon. MALCOLM JONES: In your opening statement you made much about the economics of the processes to be adopted about thermal drying processes as well as the fact that you have already processed 1.4 million tonnes. What are the projections of costs of processing and market price for the delivery of the biosolids? How much profit is Sydney Water likely to make out a processing each time?

Mr WALKER: I will take the majority of that question on notice, because the detailed costings are not available to me at the moment. Suffice it to say that it is not profitable at the moment. A major underlying element of this strategy is to produce the grade A biosolids which will enable us to open up new markets and to continue the development of what is regarded as a waste into a resource that can be marketed profitably over all.

The Hon. MALCOLM JONES: The Sydney Basin being a very big area, we are pumping sludge to its outer extremity at North Head. Basically we are pumping water to an extremity at North Head and then processing it into big pellets and bringing it back by truck. Having considered all the options that seems to be the best way of doing that. In light of that, we have looked at having processing plants in a number of spots, and correct me if I am wrong, but you have come back to a decision that North Head will be the place. Is it simply because the North Head facility is there, or could you do not find anywhere further away?

Mr WALKER: This strategy does not operate on the basis of a greenfield solution but in the context of the existing City of Sydney and its development. It is also in the context of the 20-year Water Plan 21of Sydney Water

which operates under the Government Waterways Authority's 20-year strategy which was announced in 1997, and that provides for the retention of the three major ocean sewage treatment plants for at least that 20-year period.

The Hon. MALCOLM JONES: I would now like to ask you a question which is slightly outside the terms of reference of this inquiry. You can choose not to answer it, and as far as I am concerned that will be okay, but it goes to the integrity of the decision-making process. About a year ago this Committee visited North Head. We had a look at the—

The Hon. JAN BURNSWOODS: Point of order.

CHAIR: He has not asked the question yet.

The Hon. JAN BURNSWOODS: No. My point of order is about the fact that we have had this problem on several occasions.

CHAIR: What problem?

The Hon. JAN BURNSWOODS: This Committee is in fact in many ways a different Committee, certainly in terms of its membership, but we also have the problem that with our former inquiries—our processes in doing those inquiries—once the report is in fact tabled in the House, that process comes to an end. We have had this discussion on several occasions before, you will remember.

CHAIR: What is the point of order?

The Hon. JAN BURNSWOODS: The point of order is that there are real problems in our dealing with anything that we have done before, as if there is some kind of seamless whole. That is not the way the Standing Orders of the Legislative Council work.

CHAIR: He has not actually asked the question yet.

The Hon. JAN BURNSWOODS: That is why I am taking the point of order now.

CHAIR: Maybe when he has asked the question you can take a point of order if you feel that the question is out of order, rather than interrupt the question.

The Hon. JAN BURNSWOODS: I am taking a point of order about the procedure. We have had this difficulty before.

CHAIR: What difficulty?

The Hon. JAN BURNSWOODS: The difficulty that these inquiries—that Committees like this one conduct—are actually totally separate.

The Hon. JOHN JOBLING: Mr Chairman, may I buy into this?

CHAIR: On the point of order?

The Hon. JOHN JOBLING: Yes. The point that I make in rebuttal to the point that is raised is that the previous Committee, whomever the members are and whatever they did, have reported. The document is now in the public arena and is exactly the same as any other public document on any topic relating to subjects of biosolids, sewage, pumping water, North Head, and Sydney Water, and may be referred to at any time as a public document by way of reference.

The Hon. JAN BURNSWOODS: That is true of the document.

CHAIR: There is no point of order. Continue.

The Hon. JAN BURNSWOODS: It is not true of things other than the document.

CHAIR: There is no point of order.

The Hon. MALCOLM JONES: Twelve months ago we visited the almost-completed storage tunnel.

The Hon. JAN BURNSWOODS: He is talking about a visit, not a document.

CHAIR: Could you please not interrupt.

The Hon. JAN BURNSWOODS: I just make that clear.

The Hon. MALCOLM JONES: Shortly after that it was commissioned, around about the time of the Olympic Games. Given the expense and the decision making that went into that expenditure, has that storage tunnel served its purpose? Has it been successful over its first 12 months?

Mr WALKER: I am pleased to say, Mr Chairman, that during its commissioning phase, the tunnel has been brought into operation on a number of occasions and in fact has captured several billion litres of diluted sewage which would otherwise have been discharged into Sydney Harbour. It has operated in the manner for which it was designed.

The Hon. MALCOLM JONES: You also made comments before that no decisions have been made about the return pipe.

Mr WALKER: That is correct, the sludge return pipe.

The Hon. MALCOLM JONES: Given what I have just said about bringing everything to the extremities of Sydney, because no decision has been made in real terms, is the return pipe issue dead now? Is there any possibility of that option being exercised?

Mr WALKER: Under this strategy, there is no need for a return pipe because the decision was, or is, under this strategy to process the sludge to biosolids and then transport the dried biosolids—and this I think is the key point, Mr Chairman. There are extremely large volumes of sewage which find their way to North Head but the recovered sludge is then reduced to very small volumes of dried biosolids which can be very efficiently transported by road. I repeat that we are talking about two or three truckloads per day, once the drying process is completed.

The Hon. JOHN JOBLING: To clarify that for the record, I will briefly follow up. From what you have said, I think we could reasonably deduce that in view of the cost that would now be incurred to install the sludge transfer pipe, which we acknowledge is not in place but which was discussed as maybe being placed in the North Head tunnel, in truth, the possibility of that happening is really about zero per cent. That would be a fair conclusion to draw, would it not?

Mr WALKER: I can only repeat, without using that language, that the strategy that we have established does not provide for the pipe. I do not propose to speculate in the long term.

The Hon. MICHAEL COSTA: But it is technically possible.

Mr WALKER: It is possible to do it.

The Hon. JOHN JOBLING: But if a reasonable person heard your comments, they would reasonably draw a conclusion that in fact that is more than highly unlikely—it might assist you if I use that term—to be a considered option or to happen in the future.

Mr WALKER: Again, this strategy will serve Sydney Water's and the community's needs for the significant long term. The matter of the tunnel is really not all that relevant now. The tunnel in fact only extends from North Head to Hunters Hill, and there is no provision for any pipeline beyond that to a further remote suburban site.

The Hon. JOHN JOBLING: That is fair enough. Looking at the options that you refer to in your submission, basically 28 options appear to have been considered and you have reduced those to about nine, according to page 123 of your submission, that you looked at in more detail. Principally two were barging, three were trucks, and four were incorporated pipelines. The truck and pipeline may have interposed. Again following a question by my colleague, the fact that you have North Head, in some of the comments that you make on page 131 and onwards, it would seem that a person could draw the conclusion that because it was there, you were going to use it, and you would use it because there were no other approval risks and no community disturbances, and the

Sydney Port Authority was not going to be difficult about a pipe under the harbour, or barging on the harbour. One would reasonably draw that conclusion from the document that you have put before the Committee.

Mr WALKER: I would not deny that they were factors. I will ask my colleague Ms Allen to comment on the process of going from many options to a few, but I simply repeat that we looked at the balance of community considerations—technical, economic and environmental—and they were just some of the factors under those headings. Ms Allen can speak more fully on the process.

Ms ALLEN: I am not sure that I fully understand your question so I may need to seek some clarification, but the options that were presented were tangible options. If you are talking about the pipeline within the tunnel option—

The Hon. JOHN JOBLING: No.

Ms ALLEN: Could you please clarify what you are talking about?

The Hon. JOHN JOBLING: On page 131 and onwards, the question of a pipeline under the harbour and a number of options for moving sludge to other places were clearly listed. I am referring to that and to the fact of the port authority's objection to barging. I come back to the question of your taking the line of least resistance: ultimately that is where the question leads you to.

Ms ALLEN: In choosing that option to go to Bunnerong?

The Hon. JOHN JOBLING: No, in choosing the option to stay at North Head.

Ms ALLEN: No. That option what was equally as tangible an option as the option of going to Bunnerong or the pipeline in the tunnel. We did not know that the Sydney Ports Corporation had those views until we conducted the consultation, so these options were presented as tangible, realistic options and then the consultation led us to understand that there were issues either from the community or from the Sydney Ports Corporation that they had real concerns about.

The Hon. JOHN JOBLING: Surely you had to anticipate that.

Ms ALLEN: Possibly, but the Bunnerong option is our land. It is Sydney Water's land. It is a realistic option, so why not pursue it in the community consultation forum?

The Hon. JOHN JOBLING: You pursued it, along with the question of a greenfield site at Camellia, and the conclusion that one can reasonably draw is that, to save the opposition, conflict, community and that other governmental internecine fighting, you took the cheapest option and stayed at North Head.

Mr WALKER: I would like to reiterate what I said in the opening statement. We looked at four general headings for the criteria: community considerations, technical, economic and environmental, and there was a whole range of criteria under each of those headings. There was a consultation process which involved very many stakeholders, from government to local government, to—

The Hon. JOHN JOBLING: I accept that. I also accept the four headings you have given me, of community consideration or consultation, technical, economic and environmental. Will you now tell me how you weighted and evaluated those four headings?

Ms ALLEN: I can answer that. First of all, I think it is important to mention that the criteria were a reflection of the guiding principles that we extracted during our community consultation. We did not list those criteria; they were the issues that came from the community consultation. And we asked the community: Could you please tell us what are the guiding principles that Sydney Water should use in making a decision? Those guiding principles, you will see, are contained in appendices G and H of the biosolids strategy. We took those guiding principles and put them are under the various headings which are the secondary criteria, and then grouped them into the primary criteria, as Mr Walker said, environment, community, technical and commercial.

The Hon. JOHN JOBLING: That is not the question I asked you. The question I asked you is: How did Sydney Water weight those four headings?

Ms ALLEN: I am just about to go to that. I needed to explain the history behind the criteria. If you were to look at page 92 of the strategy, the weightings are there. As you will see under "community", there was a heavy bias on trucking, 50 per cent was given, and there was a heavy bias on the marketability of the product. At the end of the day, having beneficial reuse of the product is important. So you will see that all of those weightings are there.

We then put them through a multi-criteria analysis, and we came up with option F. We even did a sensitivity analysis, which Mr Walker spoke of. In that sensitivity analysis, which is shown on pages 97 and 98 of the strategy, we gave the criteria. Let us take, for example, community, a 70 per cent weighting, and the other criteria 10 per cent each. On that run-through, and even if we were to weight up the environmental, commercial or technical, at the end of the day we continue to come up with option F. So that is how the weightings and the sensitivity analysis were done.

The Hon. JOHN JOBLING: What you have said is that the economic values and costs were not of importance in coming to this conclusion?

Ms ALLEN: No, I would not say that. I would take you again to pages 92 and 93, which contain the weightings that we gave to these criteria. You will see that, except for trucking and the marketability of the product, all the others had similar weightings. Trucking had 50 per cent and market flexibility had 40 per cent.

The Hon. JOHN JOBLING: With regard to trucking, at page 78 of your submission there is a discussion on an increase of treatment of some 50 per cent in biosolids production. When do you expect that to occur, and how was this calculated in the increase in trucking movement and the increase in size?

Dr HANSEN: The increase in biosolids will occur following the reliability and the treatment improvement upgrades at North Head. We are into some pre-consultation this year and the environmental impact statement will be undertaken between 2002 and 2003, and we anticipate that the upgrades or improvements will occur between 2004 and 2007.

The Hon. JOHN JOBLING: In other words, about 2007 is the answer to my question?

Dr HANSEN: Yes.

The Hon. RICK COLLESS: Mr Walker, I am particularly interested in the use of biosolids in agriculture. My first question relates to the different contaminant gradings of the product that you talk about. With regard to the contaminant levels of heavy metals and so on, let us assume that one of those contaminants has a high level but the others do not and that automatically puts that grade into the higher grade. Is one of those contaminants at that level?

Mr WALKER: The scientific side of it is beyond me. I think my colleague Dr Hansen would be well equipped to answer the question.

Dr HANSEN: As you say, the biosolids have different gradings related to the levels of heavy metals, other contaminants and pathogens, as well as their stabilisation grades. Depending on the levels of contaminants, these are applied to agricultural land in particular ways. Sydney is very lucky, in that our trade waste policies, our control of pollution at the source, has meant that contaminants reaching our sewage treatment plants are very low. The New South Wales guidelines for contaminant levels are also some of the most stringent in the world, which means that we can safely apply these biosolids to agricultural land. If they are class A, they can be applied with no limitations; if they are class B, they are applied in line with the guidelines, with regard to incorporation and utilisation of run-off, so that there are no adverse effects on the environment, public health or livestock that may be grazing on that land.

The Hon. RICK COLLESS: I refer to page 8 of your submission, which shows the contaminant gradings. In grade A, for example, you have zinc at 200 milligrams per kilogram. If the contaminants that were present did not exceed the limits in grade A but let us say zinc was 700 parts per million, does that automatically put zinc into a grade B contaminant, even if only one of those nutrients is in that higher grade?

Dr HANSEN: Yes, that is correct.

The Hon. RICK COLLESS: I understand from your submission that your preferred option was for preparation of grade A product from North Head by way of on-site drying?

Dr HANSEN: Yes.

The Hon. RICK COLLESS: There is no indication in that table as to what other nutrients it contains. I refer particularly to calcium, magnesium, potassium, phosphorus, nitrogen, sulphur, and so on—all the trace elements that have a valuable agricultural use. Many of the other trace elements are also valuable agriculturally, but it is the major nutrients such as phosphorus, sulphur, nitrogen and potassium, and so on, that are of major agricultural value. What sort of levels can we expect in a grade A product in terms of those other nutrients?

Dr HANSEN: I cannot give you the precise figures, but we can certainly take that on notice. These contaminant grades are developed to make sure there are no adverse impacts. Of course, the benefit of the biosolids is that it does have the nutrient levels, and it also acts as a soil conditioner as much as a fertiliser, which provides that benefit for the application.

The Hon. RICK COLLESS: I am an agricultural consultant and soil nutritionist, so I am interested in the nutrient value that is contained in those biosolids from an agricultural point of view. The next question, of course, is what sort of price structure we are looking at for these products, because I concede that they do have a value. At the moment there is a very good way of recycling nutrients, and farmers are buying processed fertilisers. Of course, all their fertilisers end up down here, because there is a continual export of nutrients from agricultural areas to the cities.

From a philosophical point of view, I believe we must send that stuff back to where it came from, where it has a value and where it can be truly recycled, and the whole philosophy of sewage management should be based on that premise. I am concerned that we send everything to North Head, which is located on the far eastern coast of Australia, when we should be sending it in the reverse direction: to the western areas where it came from initially.

Mr WALKER: To reiterate part of my opening statement, the purpose of this biosolids strategy is to recover significant quantities of nutrient-rich sludge from sewage and then to convert it into biosolids that are safe for application in agriculture, horticulture and so on. We at Sydney Water are not experts on the application end—you probably have more expertise in that area. We manage that distribution into the market and open up markets in partnership with other people. Amongst our partners in the Sydney region is Australian Native Landscapes, which takes account of the nutrient values of the biosolids and blends them with other fertilisers or materials to make them appropriate for different usages.

We are trying to address all of those issues and to open up a more diverse marketplace and achieve the most beneficial usage. Our statements about being amongst the leading practitioners in the world are not hollow. As a relative newcomer to the water industry, I have taken some trouble personally to come to grips with practices in other developed countries. I assure you that in United Kingdom, for example, they envy our success in recovering this material and re-using it .

CHAIR: That is not a good example, is it?

Mr WALKER: If you put the biosolids strategy together with the proposed upgrade, which is aimed at recovering more nutrient-rich material for reprocessing, you will find that it is a very successful strategy for the future.

The Hon. RICK COLLESS: You said that the strategy plan is based on a 20-year time frame. Do you think that is long enough? What we put in place over the next 20 years in terms of sewage management will probably remain for the next 100 years. Do you think we need a much longer time frame in which to plan that strategy?

Mr WALKER: That is a good question. We do not disregard the very long term, but there is a great deal of uncertainty when we get much beyond that. The technologies in many areas, including this, are moving so fast that it is very difficult to be too confident about what the next 20 years will hold. We are now in the fifth year of that 20-year strategy and have set ourselves the task of conducting an extensive review of our performance against Water Plan 21 and upgrading that plan so that we can adjust it for the next 20 years.

The Hon. MICHAEL COSTA: I have two questions that go to the points I made before. Can you explain for the record the way in which decisions are made within Sydney Water and what status documents have at the early stage of considering a variety of options? Who ultimately takes the decision?

Mr WALKER: Decision making in Sydney Water is the subject of very carefully prescribed delegations. Essentially all authority to make decisions resides with the board, and the board has delegated authorities to me as managing director and as a board member to operate the organisation and to approve certain projects and capital works, provided they satisfy the necessary planning requirements of the State—but with delegated limits. The executive management committee—whose documents you quoted from earlier—is essentially a vehicle for planning strategy development. It comprises the general managers and me, as chairman. We use it as a way of bringing together ideas about the future of the organisation, filtering those ideas and coming up with recommendations for the board. In the end if no decision is taken by the board on a matter as significant as this, there is no decision.

The Hon. MICHAEL COSTA: Given the competing demands on Sydney Water's scarce resources, do you, as chief executive, believe this area has been adequately resourced by Sydney Water? Do you believe—I know this question goes to opinion, but I would be interested to hear your response if you feel capable of making a statement—the resources devoted to the program, relative to Sydney Water's other concerns, are adequate, inadequate or more than adequate?

Mr WALKER: I believe the investment that has taken place and the proposed investment under this strategy reflect a reasonable balance in addressing our fundamental objective: to protect public health and the environment. The realities have been commercially viable. The essence of our current corporate plan is that we have increased the level of capital investment to pretty much the limits of our means and we have worked very hard to put in place a strategy that balances those objectives within the limits.

The Hon. JAN BURNSWOODS: Mr Walker, for reasons I do not quite understand—although I could probably guess—this inquiry seems already to be somewhat fixated (X-rated) on Manly. Can you give us a quantitative measure—either by the number of people, quantity of sludge or some other means—of what percentage of the Sydney system Manly comprises compared with Malabar and Bondi?

Mr WALKER: I can do so roughly, off the top of my head. The three large coastal plants—Bondi, Malabar and North Head—provide for about 80 per cent of Sydney sewage. Of those, the largest is Malabar, then North Head and Bondi. I cannot give you the exact split between the three. North Head in terms of people equivalents is 1.3 million people from Sydney's population of approximately four million.

The Hon. JAN BURNSWOODS: So Manly is about a third of the Sydney total?

Mr WALKER: Roughly speaking.

The Hon. JAN BURNSWOODS: I do not see why our questions are so fixated on North Head and Manly.

Mr WALKER: North Head has received priority from Sydney Water because we believe the major gains are to be had there from the upgrades, additional recovery and the beneficial re-use of biosolids. However, it is not on its own. We intend to pursue similar programs—community and funds permitting—at Malabar and Bondi.

CHAIR: I point out that details about that issue are in your submission.

The Hon. JOHN JOBLING: The Hon. Jan Burnswoods said that the Committee appears to be fixated on Manly. To pick up the question of Manly, do you believe Sydney Water's consultation with Manly, the member of Parliament and residents of the area around North Head has satisfied their concerns and fears?

Mr WALKER: I said in my opening statement that the Manly community is a very key stakeholder in all of this. We have certainly put enormous effort into informing and consulting the Manly community. It would be bold of me to claim that every member of the Manly community supports what we are doing; there is clearly a diversity of views. However, I would be so bold as to say that, through this exercise—by being as open as we can and providing a lot of information for the community—there is a better understanding of our strategy and a higher level of support overall.

The Hon. MALCOLM JONES: Is the assessment of your community consultation open to scrutiny? You have asked the public many questions and they have responded. Surely you have a process for assessing that consultation. Are there people who assess the consultations? Are the documents from the community open for this Committee or others to look at the assessment process?

Mr WALKER: Yes, all of the material is open for scrutiny.

CHAIR: In relation to the question asked by the Hon. John Jobling about options, was the option presented to the community in the Biosolids Strategy of biolsolids processing at Camellia at that time a genuine proposal that Sydney Water would have been willing to implement? If so, how do you explain the executive paper of May 1998 which examines and rejects the option of off-site processing at Camellia?

The Hon. MICHAEL COSTA: Point of order: I thought we clarified the position in relation to executive papers?

CHAIR: No, we have not. There is no point of order.

The Hon. MICHAEL COSTA: There is a point of order.

CHAIR: No, I have just ruled that there is no point of order.

Mr WALKER: Given the role of the executive management committee in filtering ideas and coming up with recommendations, it is fair to say that there has been a shifting balance of views based on the facts at the time. There have been changes in the technology, as I mentioned, better understanding of technologies, partly through experience as they have been tried and evaluated at a smaller scale at different plants. Over time Sydney Water has learnt from that experience and that learning is reflected in the information that has been made available to the community and the decision that has been made in this case.

CHAIR: Do you intend to factor into an integrated waste water strategy the future use of the water return pipe which has been fitted to the NST?

Mr WALKER: The water return pipe is a provision. It gives us that option in the long-term. In the long-term we are certainly aiming to reduce effluent discharges of any kind to the ocean. It was cost effective to make that provision, but it is a subject to a lot more capital investment and to markets opening up for that. I am actually proud to say that we have been doing a lot of work in various areas, not just the North Shore of Sydney, to try to open up those markets. This year we signed a long-term agreement at Wollongong with BHP for the daily re-use of 20 million litres of effluent from a plant there. Right across our area of operation we are looking for those opportunities but it is a slowly developing market.

CHAIR: What proportion of water from the Manly ocean outfall is able to be returned via that pipe?

Mr WALKER: I am unable to answer that question. I will take it on notice.

CHAIR: I understand that there is presently a problem with clogging of the outfall—certainly at Manly and maybe the other outfalls. How do you intend to deal with that?

Mr WALKER: There is no problem at the moment with clogging of outfalls. Ocean outfalls are not unique to Sydney: They exist in a number of places around the world. I understand from my engineering colleagues that when the Sydney outfalls were designed and the arrangement of diffuses they took advantage of learning elsewhere where there had been clogging problems. The outfalls are monitored and we keep an eye on them to make sure they are performing properly. They are performing properly. However, one of the major objectives of the upgrade program is to recover more of the solid material from sewage so that it would reduce the probability and increase in the reliability of those diffuses on the outfalls in the long-term.

CHAIR: If clogging were to occur—I thought it actually had—would it involve taking the line off-line for several months, and polluting the beaches? Is that right?

Mr WALKER: I repeat, the objective of the upgrade program is to reduce the possibility of that happening. At this stage there is no indication of that happening.

CHAIR: Do you have provision for clogging in your program?

Mr WALKER: If the ocean outfalls have succeeded in cleaning up the beaches by eliminating discharges of effluent at the cliff face, it remains the case that the plants and the outfalls are doing their job, and we intend to ensure that they continue to do their job.

CHAIR: How do you clean them out if they are clogged?

Mr WALKER: You would have to take them off-line.

CHAIR: For several months?

Mr WALKER: It is a big "if", Mr Chairman.

CHAIR: Could you use the northside storage tunnel for storing during that period?

Mr WALKER: Compared to the daily flows, that is not a practical option.

CHAIR: Will you take questions on notice?

Mr WALKER: Certainly.

CHAIR: If the Biolsolids Strategy is to be implemented, what business model will be used in the production and marketing of biosolids? What is the balance of risks and benefits between public and private investment in the proposed scheme for commercial exploitation?

Mr WALKER: I have talked generally about the fact that we have partnerships in place. I could provide more detail if you wish.

CHAIR: What is your understanding of the approval process for Biosolid Strategy? Which Minister has final approval? What roles do other Ministers play? Does the Department of Urban Affairs and Planning [DUAP] have a part to play in it?

Ms ALLEN: Yes, the Minister for Urban Affairs and Planning is most likely the person who will have a role in approving such a project.

CHAIR: Will DUAP be the final approval authority? Is it a self-approval? Do you need DUAPs approval?

Ms ALLEN: Yes, I believe so.

CHAIR: Would you take that question on notice, and confirm that?

Ms ALLEN: Yes.

CHAIR: What directions were the board of executives of Sydney Water given regarding the acknowledged commitment of Sydney Water to eliminate biosolids trucking in Manly? If board or executive directions were not given, on what basis and on whose authority was this commitment overridden?

The Hon. MICHAEL COSTA: Point of order: We have been through this. This is exactly the question I asked—

CHAIR: There is no point of order.

The Hon. MICHAEL COSTA: I have asked who has got the authority to make decisions twice, and Mr Chair continually comes back to it and asks it in a different way. Mr Chair, obviously does not understand the answer.

CHAIR: I can do that. There is no point of order.

Mr WALKER: I will re-iterate that no decision has ever been taken to eliminate the trucking, but the strategy provides for a reduction in trucking through the onsite guide.

CHAIR: What planning process affecting or potentially affecting North Head Sewage Treating Plant does Sydney Water currently have? What planning processes are in preparation? What is the scope of those plans? When are they expected to report? What is their relationship to the Biosolids Strategy?

Mr WALKER: My colleague, Dr Hansen, spoke about that earlier. We are working on the preliminary community consultation for the purpose of developing an environmental impact statement which will be discussed with the community and worked on between 2002-03 with a view to upgrading the plant between 2004-07.

CHAIR: Sydney Water's annual report for 1999-2000 shows that since 1996-97 there has been a 17.5 per cent increase in flow, and a 50 per cent increase in grease, oil and suspended sediment, resulting in an addition 16,000 tonnes of grease, oil and sediments going into the ocean. Given that the proposed upgrades to the North Head Sewage Treatment Plant can only achieve a 60 per cent sludge capture, does Sydney Water expect that this rapid deterioration will continue? What other actions does Sydney Water propose to protect this fragile aquatic environment?

Mr WALKER: I will pick up on your last comment. The overall objective is protection of the environment. In conjunction with the Environment Protection Authority [EPA] we monitor the marine ecology in the vicinity of ocean outfalls. We have the written acknowledgement of the EPA that there is no measurable degradation of the environment in the vicinity of those outfalls.

CHAIR: There will be 40 per cent of biosolids still going out into the ocean under the new proposals.

Mr WALKER: I repeat what I said earlier, the long-term objective is to reduce the discharge of effluent and to capture more sludge for the beneficial reuse of biosolids. In the end, protection of the environment is the objective, and there is no measurable degradation of the environment.

CHAIR: Do you consider that the sewage treatment plants at Manly, Malabar and Bondi will remain for the foreseeable future or do you have a long-term vision to close them eventually and, as the Hon. Rick Colless suggests, send the sewage out west in the 300 kilometre pipeline and treat it there?

The Hon. MICHAEL COSTA: Would you also add the estimated cost of such a project.

Mr WALKER: On the first question as to the future, I can only be so bold as to predict the future within the confines of our 20-year strategy, which confirms the need for those plants over that period. Beyond that, I am afraid that I do not have the clear long sight. The option of piping major quantities of effluent across the mountains to western New South Wales has been evaluated. I forget the exact figure but it is extremely expensive and would also be extremely wasteful of energy. It would take enormous quantities of energy to transfer such volumes. The estimated figure is $4.7 billion.

Dr HANSEN: It would have to be taken over a rise of 1,200 metres.

CHAIR: What plans to do you have for the Camellia land? Are you going to sell it off or keep it?

Mr WALKER: We have not made plans for that, Mr Chairman, pending this hearing and the finalisation of our strategy. The land was acquired to provide for the realistic option of treatment at Camellia. This strategy does not require the Camellia site. Assuming that is confirmed and approved as our strategy, we will look at the future of that site.

The Hon. MALCOLM JONES: Has any consideration been given to the transportation of sludge in empty coal trains as they return to their sites on the other side of the mountains?

Mr WALKER: Some of the options relating to barging were to provide for barging from Middle Manly Cove to White Bay. The essence of that was that it would provide for rail transport from White Bay to wherever.

The Hon. MALCOLM JONES: Let us come back to the question. Has any consideration been given to using empty coal trains to transfer the sludge over the mountains?

The Hon. MICHAEL COSTA: There are not enough empty coal trains.

Mr WALKER: Exactly which trains they are is not a matter for us. We were simply providing for the optimal use of that infrastructure.

The Hon. JAN BURNSWOODS: Coal trains go to Newcastle and Port Kembla.

The Hon. RICK COLLESS: And Gunnedah and a lot of places further west.

The Hon. JAN BURNSWOODS: They do not come to Sydney.

The Hon. MICHAEL COSTA: I want to make sure that the figure for the pipeline was on the record.

Mr WALKER: It would cost $4.7 billion to provide the pipeline and the necessary equipment in order to pump.

The Hon. RICK COLLESS: To where?

Mr WALKER: To the head of the Macquarie River in the vicinity of Bathurst.

The Hon. MICHAEL COSTA: But that figure does not include the cost of the exponential effects on the environment.

Dr HANSEN: I can clarify that. The initial estimates have been to treat the sewage to a level to take it over the mountains. That would require a rise of about 1,200 metres, which would generate significant electricity costs in addition to the overall costs. It would increase energy use in New South Wales.

The Hon. MICHAEL COSTA: And greenhouse gases, I assume?

Dr HANSEN: That is right. This project would result in a 5 per cent energy increase for the State. The other uncertainties are that because of salinity of sewage, we may have to treat it virtually to potable drinking water quality so that we do not exacerbate the salinity problems over the mountains.

CHAIR: Other questions about reuse of water—putting the water back where it came from, not just taking it over the mountains—have not been answered today. There was some talk about sending some of the water back to the dams. Do you know about that?

Dr HANSEN: I would like to take that in the context of our overall water management and planning for the long-term water supply for the Sydney region to be able to maintain that water supply in the face of population growth. Reuse is one aspect of our water efficiency and water management measures. We have a water conservation program with water efficiency, leakage reduction and recycling to conserve our water resource. We are finding that it is much more cost effective to work on conserving water through demand management as opposed to recycling. That does not mean that we are not exploring all opportunities to realise those recycling projects. As Mr Walker said, we have a major project in the Illawarra, and the Rouse Hill reticulation system has recently come online. As I said, we are looking for those opportunities but to maximise the benefits in water savings for our investment we focus currently on water conservation.

CHAIR: Unfortunately time is up. Thank you very much for coming and taking questions.

(The witnesses withdrew)

(Short adjournment)

DAVID BARR, Member for Manly, of 35 Sydney Road, Manly, examined:

CHAIR: Mr Barr, in what capacity are you appearing before the Committee?

Mr BARR: As the local member of Parliament.

CHAIR: Are you conversant with the terms of reference for this inquiry?

Mr BARR: I am.

CHAIR: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee will be willing to accede to your request. However, Parliament may overrule that. Do you wish to make an introductory statement?

Mr BARR: I do. This is a much-read, but not much-loved, plan. The question was asked about the Manly focus on this matter. The reason for this initial Manly focus was the northside storage tunnel and the terms necessary for that to be signed off. One condition was that there had to be a sludge strategy. So that is the reason that the original focus was on Manly. However, I should point out, just to give people a feel for this, that the northside ocean outfall sewer begins at Blacktown and wends 46 kilometres to Manly. It carries 40 per cent of metropolitan sewage. When the good residents of Blacktown have their morning constitutional, it takes 18 hours for that material to reach Manly. Some 35 per cent of that material is captured, and the rest goes out to sea. So that the North Head sewage treatment plant is very much a sub-primary treatment facility; in other words, a lot of raw sewage goes out to the ocean.

About 15 years ago there was a big noise being made about the condition of Sydney beaches. This is when there were just cliff-site outfalls. That was "resolved" by extending the pipes another couple of kilometres out to sea. All that has meant is that the volume of ocean is diluting that substance. It is not an environmentally friendly way to be going about this process. One of the things that the Committee should be looking at, but has not touched on yet, is why on earth we are pumping sewage and effluent into the ocean. How that can be justified in this so-called enlightened era is beyond me. Sydney Water is not moving out of those paradigms. There are a few points that I would like to make. We have a capture of only 35 per cent. The proposal is to capture up to 60 per cent, which will leave a lot of sub-primary going out to sea. Sydney Water's annual report for 1999-2000 says:

> Since 1996-97 there has been a 17.5 per cent increase in flow and a 50 per cent increase in grease, oil and suspended sediment, resulting in an additional 16,000 tonnes of grease, oil and sentiments going into the ocean.

Given that the proposed upgrade will achieve a 60 per cent capture of sludge, we still have a serious problem. Not addressed by Sydney Water in its document is the increased volume of northside ocean outfall sewer discharged to sea. There are two elements to what I want to say today. One is that this was an opportunity for Sydney Water to look at and do things differently. It is inexcusable to be still pumping that material out to sea. Under the proposal it will still be sub-primary because, even with a 60 per cent capture, a vast quantity will still be going out to sea.

The second point I want to make is that in the consultation process, no matter what gloss is put on it, the public of Manly and everywhere else were deceived by Sydney Water. They were deceived in that when Sydney Water it went around doing its consultation in 2000, when it went to about 30 different areas and had community consultation, two of the options that Sydney Water presented to the public—that is, piping the sludge out to Bunnerong, or piping it to Camellia—were never really on the cards. One does not present to the public options that one knows, or reasonably ought to know, are not feasible or realistic. We know that neither of those options were. In relation to Bunnerong, for instance, a document of 16 June 1998 obtained under freedom of information legislation states:

> The development of a centralised plant in the Botany area is not recommended because of the increase in costs and because it would not allow abandonment of North Head and Bondi treatment plants and outfalls.

As far as Camellia is concerned, at page 44 of water plan 21, where it looks at government agency issues, is the statement:

> The Department of Urban Affairs and Planning expressed concern that the biosolids use would be in conflict with the objectives of the Parramatta Regional Environment Plan ...
>
> Opportunities for urban renewal should not be restricted, and as such the Camellia site is noted for being within the working catchment of the future rail and transitway stations.

Was Sydney Water serious in going out to the public and offering options when there was even a faint question mark over two of the options, especially as those were the two options that most people were interested in? From the Manly perspective, obviously the notion of pumping the sludge back was a promise of Sydney Water. But Sydney Water reneged on that promise, as was conceded by Mr Walker today, with Mr Ron Quill making an apology to the people of Manly for promising that one of the deals in respect of the northside storage tunnel would be that the sludge would be returned. Why is it important to have the sludge returned? Yes, it gets trucks off the streets. It has been recognised and promised many times by Sydney Water that trucks would be removed from the streets. As an example, I quote from document No. 1, dated 19 May 1998, obtained under freedom of information legislation:

> North Head has been identified as a priority for upgrading as it is the most overloaded major coastal STP and the most significant risk. In addition, commitments have been made, as part of the Northside Storage Tunnel Project, to eliminate sludge-related trucking.

There are other documents in which that is further conceded. So it is beyond doubt that commitments have been made to do away with trucking. Why is it important to do away with trucking? What does this represent? Obviously, there is an amenity issue for the local residents with trucks passing through their streets, particularly when those trucks contain material that has been lime treated, giving off a very caustic smell as the trucks go by. The point about piping the biosolids back is that that is consistent with something that we should all be aiming for, which is decentralisation. It is consistent with interception and decentralisation.

So the bigger picture is in fact that Sydney Water is still going the same old way, which we have been going for years and years now, of doing more of the same and centralising the North Head sewage treatment plant ever more. That is why there was opposition to the North Side Storage Tunnel—because it meant entrenching the North Head sewage treatment plant. Now there is to be further infrastructure, with further treatment and further centralisation to a facility that basically is pumping this material out to sea. This proposal will not stop that. That is why the issue of sludge is so important.

The trucking is a nuisance factor. It is obvious that the people of Manly are impacted upon by sludge trucks. But the point is that the whole of the operation that is now being put to us entrenches the North Head sewage treatment plant and trucking out whatever waste can be captured, after dehydrating the material. That is, in my view, the wrong way to go. We should be looking at much more sophisticated and better ways of dealing with our sewage. The effluent was mentioned in passing here. The proposal contains no policy in respect of effluent, for the grey water. It relates only to sludge. It is not even satisfactory with the capture of all of the sludge.

But what about effluent? This is a significant part of the waste stream, but it is not being tackled in this document. Australia is one of the most water-dry continents on earth, yet we are pumping billions of litres of water out to sea. Why do we not have a more innovative approach? Why are we going down the same sterile path? Why aren't Sydney Water people being pinned down more as to what they are on about? Why aren't they being pinned down more on the way they have misled the public, not only of Manly but all around, in offering options that were never real? That is my main bone of contention.

The last point that I want to make is that there is no clarity on who signs off on all of this. Sydney Water seems to be a law unto itself. There is no whole-of-government approach. Many different agencies and government departments are involved, for instance New South Wales Agriculture, New South Wales Fisheries, the Department of Environment and Planning, the Department of Urban Affairs and Planning and so on. Each may have its own piecemeal input, but there is no overall, holistic approach to what Sydney Water is doing. I have written to the Minister for Urban Affairs and Planning, the Deputy Premier, and I have had two letters from him over time. These are part of my submission. The Deputy Premier, in his first letter to me, said that he would wait for this inquiry before going further and determining the issue of the northside sewerage tunnel itself. In the second letter he says:

> Neither DUAP nor I have any specific statutory role in assessing and determining the strategy. However, DUAP will review the strategy in consultation with other key agencies.

No-one seems to know who has final responsibility, other than Sydney Water doing these things.

CHAIR: They do not seem to know themselves.

Mr BARR: They do not seem to know themselves.

The Hon. Michael Costa: Point of order: That is just speculative. I have heard Sydney Water—

Mr BARR: I am sorry, it is not speculative. There was a question asked today and Sydney Water answered.

The Hon. Michael Costa: The answer indicated that the Board of Sydney Water within the regulatory framework of Sydney Water has the ultimate say in these things, and they have to seek approval from the relevant authorities. That was clear to me.

Mr BARR: Have a look at the—

The Hon. Rick Colless: To the point of order: He is using the point of order as a debating point, not drawing the point of order.

Mr BARR: Have a look at the letter the Minister wrote to me. That is the essence of what I have to say. Every decade this issue comes up as to what the heck Sydney Water is doing, and can it not be doing things differently. We are now going down the same old path with more infrastructure decentralising at North Head Sewerage Treatment Plant. In their consultation process they deceived the public; I make no bones about saying that. Peter Coombes from the University of Newcastle, Department of Surveying and Environmental Engineering, a witness who, unfortunately, could not appear today because of time constraints placed on us all, presented a very good paper on this issue at the forum I held here about six months ago. He is focusing on decentralising. I seek permission to table the outline of his concerns, and I am prepared to read some of it.

Document tabled.

He has reviewed the proposal and a long time ago we tried to line him up to come here. He says that the Sydney Water Corporation seems to have selected their solution from a very narrow set of centralised solutions. He states that decentralised solutions were not examined in any detail or completed, which is the point I have made. He further states that the problem was not examined in the context of the entire urban water cycle, stormwater, storage and water. I will leave you to read the rest of it. I have left a copy of this submission for everyone for today.

CHAIR: That has been tabled.

Mr BARR: That should be the theme of this inquiry, alternatives. What you need to do is bring in the experts from other institutions, from universities and wherever to put forward their perspectives on what Sydney Water is doing. We need some expert input.

CHAIR: Sydney Water says that the proposed drying of sludge into pellets is now the norm in Europe, and that is why they are going down that track.

Mr BARR: They can do the drying wherever like, but I am arguing against it at North Head.

The Hon. JAN BURNSWOODS: I know you are arguing against it at North Head, so where are you arguing for sewage treatment plants?

Mr BARR: What I am arguing is that North Head Sewage Treatment Plant is being entrenched more and more—

The Hon. JAN BURNSWOODS: Yes, I understand that, but where—?

Mr BARR: We should be looking at medium to long-term to decommission—

The Hon. JAN BURNSWOODS: Where else would sewerage plants go?

The Hon. MICHAEL COSTA: Can you name an area?

Mr BARR: Sorry?

The Hon. MICHAEL COSTA: Can you name an area?

Mr BARR: We had Camellia and Bunnerong offered for a start.

The Hon. JAN BURNSWOODS: So you are suggesting that sewage treatment plants should go—

Mr BARR: No, I am suggesting that we should look at strategies and more interception of this material. The 46 kilometre-long—

The Hon. JAN BURNSWOODS: But where?

CHAIR: It is part of Sydney Water's strategies to sewer—

The Hon. JAN BURNSWOODS: But when witnesses come along and say that something should not be here, it is reasonable for the Committee to explore with you where you think it should be.

Mr BARR: What I am calling for is a much more enlightened approach to the way we treat sewage.

The Hon. JAN BURNSWOODS: I heard you say that, but where do you want to treat it?

Mr BARR: One of the things that has come through in trucking is that it is just a not in my back yard [NIMBY]—

The Hon. JAN BURNSWOODS: You are not answering my question.

Mr BARR: I am going to come to it. It is depicted by the Government as a kind of NIMBY approach that the people of Manly do not want trucks going through their streets, and that is all there is to it. That is trivialising it to the ultimate degree. Where do you have points of interception? Well, that is for the experts to determine. When you have a 46-kilometre long pipe taking sewage from Blacktown and through to Manly there may be various points of interception. We should look at ways of keeping waste as much as possible within the communities that create it. That would be the ideal situation. Then you have small-scale operations and many of them including, obviously, Manly.

The Hon. MICHAEL COSTA: Is this fantasy?

Mr BARR: Why is it fantasy? Read the Peter Coombes paper.

The Hon. JAN BURNSWOODS: I remember, for instance, when we did the pooh 2 inquiry, the honourable member for Lane Cove was originally very opposed to the northside storage tunnel.

The Hon. JOHN JOBLING: Could you explain pooh 2 for the record? We understand what you mean, but others may not.

The Hon. JAN BURNSWOODS: This is pooh 3 or pooh 3½. Pooh 2 must have been the northside storage tunnel. Sorry, it was Scotts Creek, or whatever you call it.

Mr BARR: That is trivialising it.

The Hon. JAN BURNSWOODS: The honourable member for Lane Cove was very opposed to the storage tunnel until local Lane Cove people got together and pointed out to her that there would need to be an expansion of the sewage treatment plant on the banks of the Lane Cove River to cope with the stormwater overflow. That is the kind of specific I have in mind. Once we get into the detail of these proposals it then becomes a question of looking at the pros and cons of individual sewage treatment plants in individual areas, as the honourable member for Lane Cove discovered. Given your emphasis on Blacktown, I member the other great highlight of pooh 2 was—

Mr BARR: I have not emphasised Blacktown at all.

The Hon. JAN BURNSWOODS: —the wonderful witness who came along and told us that sewage from people living in western Sydney was less healthy than sewage from people living on the North Shore. But I gather, therefore, you would have a sewage treatment plant at Blacktown, would you?

Mr BARR: I am not saying where there should be plant. It is not my job to do that.

The Hon. JAN BURNSWOODS: What is your job? Your job is only to look after the people of Manly?

Mr BARR: We have a huge corporation—

The Hon. MICHAEL COSTA: NIMBY.

Mr BARR: We have a huge corporation, which is spending billions of dollars over years developing strategies, and I am suggesting to you that the whole paradigm is wrong at the moment.

The Hon. MICHAEL COSTA: But you are not putting up any alternatives.

Mr BARR: Sorry! Read, for a start. I have suggested that you bring in people like Carey Reynolds and Peter Coombes. The Carey Reynolds strategy is—

The Hon. JAN BURNSWOODS: But why did not any of those people bother to make a submission?

Mr BARR: Well, this one here.

The Hon. JAN BURNSWOODS: This inquiry had a pitiful 17 submissions, and none of the people you are talking about bothered. When most of them were invited to come along here to give evidence, they refused to come.

Mr BARR: I do not believe this. We are talking about a really serious environmental issue and—

The Hon. JAN BURNSWOODS: Exactly, why were they not interested?

Mr BARR: —you are trivialising it.

The Hon. JAN BURNSWOODS: I am not.

The Hon. JOHN JOBLING: The witness is being harassed outside the question.

The Hon. JAN BURNSWOODS: Some of those people you name were invited to come, but they refused to come.

The Hon. JOHN JOBLING: That is not for the witness.

CHAIR: Timeframe.

Mr BARR: The Hon. Jan Burnswoods was not one of those people who showed up at the forum I held. It was a very good forum.

The Hon. JAN BURNSWOODS: You mentioned Carey Reynolds: refused to come. Peter Coombes: on and off, if and but, maybe I will, maybe I will not.

Mr BARR: And do you know why?

The Hon. JAN BURNSWOODS: Why?

Mr BARR: Because of the way this was organised. It was done so quickly and in such a hasty way.

The Hon. JAN BURNSWOODS: We have had this inquiry since the year 2000. We were supposed to report a year ago.

Mr BARR: Two days ago he knew about it.

The Hon. JAN BURNSWOODS: That is not true.

Mr BARR: Yes, it is true.

The Hon. JAN BURNSWOODS: That is a slur on behalf of this Committee.

Mr BARR: It is true as far as Friday is concerned.

The Hon. JAN BURNSWOODS: It is not true.

Mr BARR: As far as today is concerned it is true.

CHAIR: It is true.

The Hon. MICHAEL COSTA: A serious question: Do the residents of Manly use electricity?

CHAIR: That is a stupid question.

The Hon. MICHAEL COSTA: Hang on. I want to follow the logic of this.

The Hon. JOHN JOBLING: See where he is going. It is a simple answer.

The Hon. MICHAEL COSTA: Do they use electricity?

Mr BARR: You know they do.

The Hon. MICHAEL COSTA: Of course they do. Where is electricity produced, and how is it produced in this State? You can answer it; I can answer it. Primarily by coal-fired power stations, which are located in numerous locations across the State. If the residents of those locations took exactly the same attitude that you have taken to this inquiry, which is if it is produced somewhere it ought to be dealt with in that particular spot, how would you deal with that?

Mr BARR: There are totally different considerations. If you are happy with pumping sewage out to sea, fine, just say so and leave it at that.

The Hon. MICHAEL COSTA: Are you telling me that greenhouse gases are not a problem?

Mr BARR: I am not saying they are not a problem. I am saying that you seem to be happy with the notion of pumping sewage out to sea.

CHAIR: Can I ask you are serious question?

Mr BARR: Yes, thank you.

CHAIR: Not a mock question—

The Hon. MICHAEL COSTA: That was a serious question.

CHAIR: You have seen the various options presented and considered—

The Hon. JAN BURNSWOODS: We object. You keep your comments to your own questions.

CHAIR: You have seen options A to G, including Bunnerong and Camellia. Do you believe that the Bunnerong and Camellia options were genuine options? As we have seen, Camellia really was not a genuine option.

Mr BARR: No, I do not believe they were genuine options. That is the whole point. That is why I say, that it is grossly misleading on the part of Sydney Water to have these as options when they were not serious options. I hasten to add that I know the people who went around to do the community consultation. I do not think they were party to that, but I think at higher-up levels it was never really on.

The Hon. JOHN JOBLING: In your submission to the Committee you refer to several issues that you would like the Committee to consider. Amongst the points that you make in your submission you state:

> Information on truck movements is contradictory and misleading.

What do you mean by that?

Mr BARR: Sydney Water has never really clearly explained this issue. I mentioned that there would be an increase in population numbers. So that means that a lot more biosolids would be coming through. But there would also be an increase in the capture rates. That will move from about 35 per cent to around 60 per cent. Obviously, that will increase the volume. Sydney Water is saying that the heat treatment it will use will reduce the volume. Basically, Sydney Water said that the number of truck movements will stay much the same, even though the volume that is coming through has increased, because of the process that it is using. Sydney Water does not appear to have factored in the increase in population or the fact that it is capturing more biosolids. The figures are not clear. Given the conduct of Sydney Water, we have no reason to feel safe about its projections.

The Hon. JOHN JOBLING: You also said that the results of public consultation were systematically distorted in the presentation of the strategy. That is a fairly serious comment to make. How do justify that comment? Will you explain it?

Mr BARR: As I said earlier, if you present to the public something that is not possible or something that will not happen, you are being less than open and honest with them.

The Hon. MALCOLM JONES: You have been following the whole process of community consultation since its inception. Is the process of assessing community consultation open for scrutiny? Earlier Alex Walker said that not just the submission but everything else was open for scrutiny. Would you agree with that?

Mr BARR: Sydney Water has its criteria—community, technical, environmental and so on. I do not know how it reached its decisions other than for expediency. It has gone down the expediency road. The North Head sewage treatment plant has been constructed and the northside storage tunnel has just been built. Therefore, the most convenient thing to do is to process on that site and build it up. To my understanding that is how Sydney Water came to its decision.

The Hon. MALCOLM JONES: I come back to the question I asked earlier. Sydney Water said that the consultation process was open for scrutiny. You have been observing this process since its inception. Have all the documents that you wanted to look at been made available, or have certain documents or certain people been off limits to you?

Mr BARR: We did get some information through the freedom of information process, but that was as a result of deliberations within the organisation. Some options were not really options at all, but Sydney Water has come to a decision. In that process distortion has taken place. However Sydney Water justifies what it has done, we still come up against the issue that it offered a couple of options that were never really on. Sydney Water might say that it is open to scrutiny, but it is not really. It is very unsatisfactory.

The Hon. MICHAEL COSTA: Sydney Water indicated to us that it cost $4.7 billion to implement what appears to be a preferred decentralised solution. Where did that $4.7 billion come from?

Mr BARR: You are wrong. It is not a decentralised solution. That would be centralising west of the mountains. Suggestions have been made. Experts have come up with notions of mixing waste and sewage and pumping it out west. You get a consortium, you mine at the other end and you get Sydney Water to pay X amount of dollars every year to have it taken off its hands. There all sorts of innovative ways in which things can be done. But that is not a decentralised model; that is at the other end of decentralising and interception. That is pumping the whole lot out west and centralising it out west. That is something that is well worth looking at. You could create new industries there. You could create—

The Hon. MICHAEL COSTA: So you are supporting that proposal?

Mr BARR: No.

The Hon. RICK COLLESS: You are discussing it.

Mr BARR: I am discussing it. I am saying that, in the context of what is happening here, we should be open to all possibilities. I am saying that we are just being railroaded down one path.

The Hon. MICHAEL COSTA: This Committee has to make a report at some point. It is not valuable to say that what is currently in place does not work and that we ought to change it.

Mr BARR: I do not think I said that.

The Hon. MICHAEL COSTA: You implied it. You have not come up with a fully costed alternative proposal that we can have a look at. What is the point?

Mr BARR: You are a parliamentarian. You have a certain amount of political importance. You could try to get that sort of thing done. That is precisely what I am saying should be done.

T**he Hon. MICHAEL COSTA:** So we do not have any other alternatives.

The Hon. JAN BURNSWOODS: When I was looking through the letter that you presented from Peter Coombes I noted that it dealt entirely with water—grey water, rainwater tanks in Sydney and so on. This is an inquiry into Sydney Water's biosolids strategy. I understand that to mean that, while there is some connection between the liquid and the sludge, basically this is an inquiry into how Sydney Water or the whole community deals with solids.

Mr BARR: The issue, for example, of stormwater has a direct impact on the whole sewerage strategy.

The Hon. JAN BURNSWOODS: You recommended Peter Coombes as an expert that we must take note of. Obviously that is why I moved a motion that his material be tabled. But the letter does not say anything about biosolids.

Mr BARR: Why did Sydney Water build the northside storage tunnel? You tell me.

The Hon. JAN BURNSWOODS: As you know perfectly well, witnesses do not ask Committee members questions.

Mr BARR: The point is that stormwater and sewage are closely interrelated because of the impact of one on the other.

The Hon. MICHAEL COSTA: Sydney Water built the northside storage tunnel for aesthetic reasons.

The Hon RICK COLLESS: Point of order—

CHAIR: That is just insulting. I thank the witness for attending today.

The Hon. JAN BURNSWOODS: I asked a serious question. I would like to have the answer.

CHAIR: The honourable member should place her question on notice.

(The witness withdrew)

JAMES WINSTON HUNTER, Director of Service Planning and Commissioning, Manly Council, 914/22 Central Avenue, Manly, sworn and examined:

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr HUNTER: Yes.

CHAIR: If you should consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee will be willing to accede to your request, but that may be overturned by Parliament. Do you wish to make an introductory statement?

Mr HUNTER: Yes, Mr Chairman. Council has made a written submission to the inquiry and has responded to each term of reference of the Committee. I speak on the basis of my understanding of the views of Manly Council as a body corporate and as endorsed in mayoral minutes, notices of motion, resolutions and reports endorsed by council. I have had a long association with Manly Council over many years and have been involved with issues surrounding sewerage treatment at North Head. Over that period we have had numerous matters to deal with with Sydney Water and that has built up concerns, I suppose, over a period of time.

I will move on to that in relation to our current concerns, but in the past we have had concerns regarding the Norfolk Island pines at Manly. More than 100 of those mature trees have had to be removed. They have an association with sewage discharge at Manly. There has also been the issue of water quality at Manly and sewage, litter, and so on. That was a continuous problem, and to some extent still is a problem at Manly, particularly prior to the construction of the extended ocean outfall in 1990.

There has always been conjecture about what was coming out of Sydney Water, types of treatment, screening, primary and secondary treatment and so on. Promises have been made and broken consistently over 20 to 30 years. We then had the northside storage tunnel proposal, and, on presentations at Manly Council and to the community it had included in the estimates provision for a return sludge pipe and a water reuse pipe. We now have condition No. 25 of the northside storage tunnel approval which related particularly to the biosolids strategy, and we are at issue with Sydney Water over the manner in which that choice of option has been arrived at.

Council, over those previous issues that I have raised, has come to form an opinion that Sydney Water often is lacking in the provision of information. Promises have been made and broken in the past, and there is evidence of that. There is a general mistrust of Sydney Water and its predecessor, the Metropolitan Water, Sewerage and Drainage Board, and there is scepticism that a long-term strategy is in the place that will alleviate the entrenchment of reliance on the ocean outfall plants as enunciated in the Carr Government's 1997 waterways package.

I would like to turn to some of the terms of reference and some of the issues we have had as expressed by council. Your first criterion or point of reference is to "evaluate the options presented for public consultation". By reference to appendix D in the submission made by Council it should be noted that there are extracts from the minutes of board meetings of Sydney Water referring to estimates for the northside storage tunnel. Originally they were $290 million and they subsequently rose to around $300 million, and the latest information we have is that the tunnel project will cost in excess of $400 million. The point to be made there is if that is the sort of estimating that is done in relation to that project, we bring into question whether the figures that were produced in this document to come to the conclusion that option C was the best option—

CHAIR: What is "this document" so that Hansard can record that?

Mr HUNTER: This is the "Have your say" document. It is the options assessment produced by Sydney Water and distributed to the community in June 2000. The point is that we are bringing into question whether, as is evidenced here, great reliance is put on the cost of the various options. If it is $100 million out in relation to the tunnel, what is the order of accuracy in relation to these options? The next question that arises from that, is it possible that Sydney Water may have juggled those figures to suit a choice that it had as a preferred option?

The Hon. MICHAEL COSTA: Do you have any evidence for that?

CHAIR: He has not finished his statement. Please do not interrupt.

The Hon. MICHAEL COSTA: That is outrageous.

CHAIR: Just do not interrupt. Sorry about the interruption, please continue.

Mr HUNTER: Also in relation to this document, council feels that the community has been presented with a number of options which have not been fully explained and, therefore, not fully understood. At page 5 of this document, "Have your say" there is reference to on-site biosolids processing. It states:

> This process produces granules or pellets that can be used in agriculture, forestry, fertiliser manufacture or as an energy source.
>
> Whilst new to Australia, this technology is established [overseas] …
>
> This option would only be implemented if the on-site treatment of bio solids is confirmed as a preferred [option for] … North Head.

What is not explained by this brief reference is an energy-from-sludge option involves some form of incineration or heat treatment. Council believes that when people were considering their choice of options they did not fully understand the implications of this option. So, those two lines, if you like, certainly did not alert most people to the fact of the energy from sludge and the implications of that to the environment, and so on. Therefore, in response to the question of whether that particular term of reference has been satisfied, council believes that was not adequately explained or presented to the communities that had access to the document.

Part (b) of the terms of reference refer to whether the selected options provide for decentralisation and devoluming of the system. We would argue in response to that, if the reference to "system" is to include the Northern Suburbs ocean outfall system [NSOOS]—and we believe it should, because sewer overflows are such a big part of the problem—one would have to argue or conclude that there is no decentralisation or devoluming of the system at all upstream of North Head. So, in response to your term of reference (b), does it decentralise and devolume, we would conclude that it does not. This is clearly at odds with the vision and commitment given in the Carr Government's 1997 waterways package. At the launch the Premier is quoted as saying:

> The Waterways Package is the result of two years of scientific research and development by the Environment Protection Authority and Sydney Water. The methodology used by Sydney Water was checked by the CSIRO.

The key benefits of the package were quoted as being decreased reliance on ocean discharge and promotion of effluent recycling, amongst others. Other fundamental concerns of council relate to why Sydney Water is not being asked to pursue the vision document of the Carr Government. In particular, I draw the inquiry's attention to letters from both the Minister for Urban Affairs and Planning and the Minister for the Environment, which are appendices G and H to council's submission. In both cases, both Ministers used the words "to the effect". Neither the Minister nor the department has any formal role in developing or approving the strategy. As far as council is concerned, this is alarming, as council believes it should be able to rely on these two departments to ensure that issues of environmental protection and urban planning are properly addressed at a very high level. The penultimate paragraph of the letter from the Deputy Premier states:

> … DUAP nor I have any specific statutory role in assessing and "determining"—

I make particular reference to the word "determining"—

> the strategy.

In the same paragraph he concludes,

> Consideration will also be given to the findings of the Legislative Council's General Purpose Standing Committee No. 5 … in determining the response to the strategy.

So on one hand he says that he has no role and then concludes by saying "in determining the response". This appears to be a contradiction. Further evidence of council scepticism is based on appendix I of the council submission, which is an exchange between Mr Ron Quill of Transwater and the director-general of the Department of Urban Affairs and Planning. The exchange of a series of faxes starts with the director-general imposing a condition in relation to the northside storage tunnel requiring that the strategy specifically address the cessation of

biosolids transport by road from North Head. The exchange goes backwards and forwards between the two parties and concludes with deletion of any reference to cessation of trucking or the installation of the replacement pipeline.

To summarise, council's experience is that in arriving at the conditions for the northside storage tunnel the conditions were watered down so as not to require the return sludge pipeline. That was the first thing that occurred. There is evidence in our submission that the board level of Sydney Water had included in the preliminary estimates, and in the design, provision for the return sludge pipe and also for the water reuse pipe. This gives rise to the question: Why would Sydney Water not pursue the long-term objectives of the cessation of trucking? The apparent answer is that there is another strategy in mind. I alluded to that earlier. It involves the energy from sludge option. They are not prepared to fully disclose that at this time but it seems that it will possibly involve incineration at North Head.

The other consequence of this might well be that virtually all sludge at North Head is consumed in the energy production process. This gives rise to a further question: If this is the scenario, why has Sydney Water not presented this option in detail for community comment as opposed to the incremental entrenchment in evidence at the moment? Council believes that the scenario is likely to build on the previous deletion of the sludge pipe, the deletion of the water reuse pipe and probably, by increment, will move ahead to the introduction of the drying and then possibly energy from sludge. The people of Manly probably will be offered the choice of more trucking as more volume comes to North Head. I suspect that as they become more frustrated with more trucks they may well be offered the alternative of barging. I suspect that when they become frustrated with both of those they may well be offered a further carrot to reduce trucking by the introduction of energy from sludge.

One would have to say that this seems to be a far cry from the vision as enunciated by the Carr Government in the 1997 waterways package document and council is strongly of the view that the government departments responsible for proper planning and development of this State should be made to direct their energies in a co-ordinated fashion to achieve that vision. This vision was fundamentally predicated on decentralisation, interception, devoluming and recycling. None of what we see happening at the moment seems focused on those issues.

The last question I pose is: Who is looking at the big picture? Is it better to burn the sludge to produce energy than it is to use it to make our degraded agricultural land more arable and productive for an ever-increasing population? According to David Suzuki, acclaimed environmentalist, in 1990 about 40 cities in the world had a population of more than a million and today there are over 400. Sydney Water cannot be relied on to see things other than from its own perspective, and the Government and government departments need to pursue the right long-term vision, not this short-term, expedient quick fix.

CHAIR: You are not reassured by Sydney Water's declaration that there will be fewer trucks in 2007 when the pellets are dried and trucked out?

Mr HUNTER: There may well be fewer trucks as a result of the drying. That assumes that they can control the volume. But there is no system in place or no vision in place to do the devoluming. So it will all still come to North Head. Then the degree to which drying is effective is the first thing. There may well be a reduction in the number of trucks just by reason of drying. Manly Council is of the view that it is unlikely that Sydney Water would think of that as being the strategy for the indefinite future: in other words, that for the next 50 years or one hundred years trucking through the streets of Manly will be an option for it. Having control of traffic management in Manly, I have to say that to get from the eastern hill across the Corso is extremely difficult at the moment. The new wharf interchange has further exacerbated the problem.

The seminary land on the eastern hill has been approved for about 150 new dwellings by court order. There are still large parcels of land there for redevelopment. The hospital is potentially available for redevelopment. The quarantine station is to be opened for tourist purposes. The School of Artillery is to be put to some form of beneficial reuse. So traffic through Manly will be a considerable problem. The only way out of Manly for these trucks is to go through the front door of Manly. So if you come out of the ferry wharf and stand on the kerb a truck goes past your nose. That is how it is. I do not believe that is its long-term plan. The council believes that it could not possibly be a sustainable strategy. There is a strong suspicion that energy from sludge will be announced at some point when the further increments towards that have been established.

The Hon. MICHAEL COSTA: During your statement you made a serious allegation that Sydney Water may have fudged figures in relation to the northside storage tunnel. Do you have any vidence for that?

Mr HUNTER: I do not believe I said "may have fudged". I said there is scepticism about the accuracy of the figures given. The estimate provided for the tunnel was $300,000 and it is now costing in excess of $400 million.

I got that figure from Sydney Water yesterday. It suggests more than $400 million. So we are concerned that if that figure is inaccurate these may well be inaccurate as well.

The Hon. JAN BURNSWOODS: On your question about the trucks, Sydney Water told us earlier—I am not sure whether you were here—that once the new system for processing the biosolids is in place there would be only two to three trucks per day on Darley Road. Would you regard that as a serious traffic problem for Manly?

Mr HUNTER: Yes, I believe it will be in the longer term.

The Hon. JAN BURNSWOODS: I am sorry, I do not understand what you mean.

Mr HUNTER: It is already a problem in that at various times of day now there is gridlock on the eastern hill where—

The Hon. JAN BURNSWOODS: No, two to three trucks per day?

Mr HUNTER: Yes, I hear what you are saying.

The Hon. JAN BURNSWOODS: Which is obviously well under 1 per cent of the vehicle movements. Why would you describe that as a traffic problem?

Mr HUNTER: I alluded earlier to the fact that many very large traffic generators are yet to occur on the eastern hill of Manly.

The Hon. JAN BURNSWOODS: Yes, I think it said something like 150 units.

Mr HUNTER: That has already been approved by the court. I also said that there was a substantial other area of land that is still owned by the church which is yet to be developed. There will be significant developments that will be big traffic generators.

The Hon. JAN BURNSWOODS: I understand all that but one to two truck movements a day pales into absurd insignificance beside the traffic that would be generated by 150 units on one side and X number of units on another.

Mr HUNTER: The only comment I would make about that is that what is generated by dwellings is very different compared with what might be developed at North head in terms of servicing large tourist attractions, hospitals or the School of artillery, whatever that might be, a university or something else.

The Hon. JAN BURNSWOODS: Perhaps to put it in comparison, in the Ryde area where I live there has recently been considerable discussion about the fact that Manly Council, along with all the other northside councils, is contemplating trucking all its waste to a site in North Ryde. There is a suggestion of something like 790 trucks a day. I guess this comes back to a question Hon. Michael Costa asked earlier about, if you like, sharing the pain. However, in relation to Manly Council's attitude to trucks taking its waste out, how would you compare that to one or two trucks a day going out with sludge?

Mr HUNTER: I do not care to comment about the waste issue. To my knowledge Manly Council does not propose to ship its waste to Ryde. It has other strategies which we are working on, and they do not involve Ryde.

The Hon. MICHAEL COSTA: Do they involve shipping waste outside the Manly municipality?

Mr HUNTER: No. We own a site in conjunction with some other councils—

The Hon. JAN BURNSWOODS: Is that Kimbriki?

Mr HUNTER: Yes.

The Hon. JAN BURNSWOODS: But Kimbriki's nature will change once there are other proposals. In any case, Kimbriki is not within the Manly area, is it?

Mr HUNTER: We own part of Kimbriki.

The Hon. JAN BURNSWOODS: I know you own it, but it is not within your council area, is it?

Mr HUNTER: No, it is not.

The Hon. MALCOLM JONES: Point of order: This is getting completely outside the terms of reference for the inquiry.

CHAIR: Yes. Are there any other questions?

The Hon. RICK COLLESS: Does your council have a goal or a vision for the Manly area and over what sort of time period is it applied?

Mr HUNTER: Yes, we have strategic plans. The shorthand of it is that we have annual budgets and then we go to a three-year plan and then we have strategic plans which go to a 10-year and 15-year time frame.

The Hon. RICK COLLESS: More of a vision type thing?

Mr HUNTER: Yes. If I could just relate that to issues that are particularly relevant to Manly, such as tourism, one of my quotes from Suzuki about world population also relates to issues such as tourism. We closely follow the issue of tourism and the numbers of people who are coming to Australia, and then we rate ourselves in relation to being a tourist destination within the Sydney framework. We are usually third or fourth behind the Blue Mountains, the Opera House, and so on—a ferry trip to Manly. One thing we constantly have to wrestle with is controlling the love of Manly in the sense of international people and people from other parts of Sydney wanting to see it. The greater the density of dwellings in Sydney, the more people need to find a place to go and have their recreation. We are struggling with that now.

I know that other Committee members are talking about just a few trucks. These are very large bogey trucks. They are 26-wheeler trucks and they are having to go through residential areas. So I do not think we can diminish the significance of what you are referring to as a few extra trucks. The point is that unfortunately there does not seem to be any horizon beyond the drying at this moment that Sydney Water is giving us as a revelation as to how it will solve trucking. That is why the Carr Government's document which talks about decentralisation and devoluming has some support from Manly Council.

Although we know that there may have to be other things put in place in the interim, one would hope that someone somewhere is thinking in a broader capacity. Certainly in relation to whether you should burn the sludge—whether that is the best thing to do with it—or whether you should be putting it into agriculture, someone somewhere should be thinking about it. The environment department and the Department of Urban Affairs and Planning do not seem to be taking enough interest. The Ministers are certainly saying, "It's not our job."

The Hon. RICK COLLESS: I think you have already answered my second question but I will ask it for the purpose of the record. How does that vision address the issue of the sewerage outfall and the sewage treatment plant North Head facility generally? As I said, I believe you have already answered that question. My third question is: Are you aware of how much water is pumped out of the outfall?

Mr HUNTER: In terms of the first part of the question, the word that probably is most commonly used by council is "entrenchment". If there is something that is turning the corner and turning this around so that there is a horizon, where something other than reliance on ocean outfall—in the waterways package the Carr Government said that it will not longer rely on ocean outfalls or there will be less reliance on them. At the moment we see nothing that is going in any other direction.

CHAIR: For the next 20 years, according to Mr Walker.

Mr HUNTER: That is right. Our concern is about entrenchment. I do not think our council would be so concerned if there was something else on the horizon that stopped us feeling further entrenched.

The Hon. RICK COLLESS: In that case the amount of grey water that comes out through the outfall—

Mr HUNTER: I think the licensing on the Environment Protection Authority is 1500 megalitres per day.

The Hon. RICK COLLESS: There are some figures in the Sydney Water submission which say that the North Head STP average daily flow of 313 megalitres a day. Whether that is the exact figure or not is not relevant to the question.

The Hon. JAN BURNSWOODS: The figure I have is 400 million litres.

Mr HUNTER: It is licensed for—

The Hon. RICK COLLESS: The ballpark figure of 300 megalitres, 400 megalitres or 500 megalitres a day. Whatever the exact figure is does not really matter. Is your council aware that that water has a very real value west of the range?

Mr HUNTER: My word.

The Hon. RICK COLLESS: Are you aware of what the value of that water is west of the range?

Mr HUNTER: Not in dollar terms, no.

The Hon. RICK COLLESS: It is somewhere between $1,000 and $1,500 per mega litre. We are talking about hundreds of thousands of megalitres per year at 400 megalitres a day, which is worth somewhere in the vicinity, as a capital value as irrigation water, of about $1,000 to $1,500 per megalitre. So we are talking about well over $100 million worth of water.

Mr HUNTER: Yes.

The Hon. RICK COLLESS: Given the value of the water we are talking about, do you think it is worth pursuing again the option of looking at pumping that water west of the range?

Mr HUNTER: My word. The original cost estimate for the tunnel had provision for the return sludge pipe and a water reuse pipe. That was provided within the original $290 million estimate. There is evidence in the submission we have made that within the board of Sydney Water that is how senior people within Sydney Water were thinking at the time and were recommending to the board at the time and actually got the allocation of $300 million to do it. So the experts within Sydney Water were thinking that this is the vision and this is what we should be doing.

Our reliance basically is on what we have been able to glean by going into Sydney Water and getting it out from their own files. There was an earlier question about what to do with the sludge. Also in the submission from Manly Council it was indicated that the senior experts within Sydney Water were recommending that all the sludge treatment should be in the industrial area at Bunnerong—it was the most appropriate way of handling it—and they put a net present value cost on it of $500 million. We do not think that is unreasonable, given the tunnel project just for the NSOOS, whereas the other ones would include all of the ocean outfalls. You are talking about $500 million versus $400 million. So in terms of investment it did not seem out of the ballpark.

(The witness withdrew)

PAUL BERNARD COFFEY, Director, Resource Recovery Management Pty Ltd, 166 Cabbage Tree Road, Grose Vale, sworn and examined:

CHAIR: In what capacity do you appear before the Committee?

Mr COFFEY: As an individual.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr COFFEY: I am.

CHAIR: If you should consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request, but that may be overruled by Parliament. Do you wish to make an introductory statement?

Mr COFFEY: Yes. I am the director and principal of Resource Recovery Management, we do a lot of work with organic waste and organic waste management. I am also the director and a partner in a company called C4ES, which is the Centre for Environmental Solutions, an environmental and waste management consultancy. We provide industry, Federal Government and the State Government with professional services related to recycling, waste management, waste minimisation policy and practices.

I am an industry representative on the New South Wales Environment Protection Authority Biosolids Guidelines Committee. I am an industry representative on the New South Wales State Government Green Waste Action Plan Task Force. I developed the Green Waste Action Plan for metropolitan Adelaide. I have had a lot to do with organics. I am a member of the Institute of Instrumentation Control Engineers of Australia, the Waste Management Association of Australia, and a division called Compost New South Wales.

I was the chairman of Compost New South Wales from 1997 to 1999. I am a member of the Energy from Waste Division and a member of the Australian Water Association. I am also a technical adviser to a joint committee which was set up between the Australian Water Association and the Waste Management Association, called the Biosolids Task Force. That task force has representation from nearly all of the stakeholders within government and industry including Forestry Agriculture, Sydney Water, Hunter Water and some smaller councils.

In my professional career I had 15 years as a naval systems technician working on weapons systems for the Department of Defence. For 12 years I was a materials handling engineer in the mining industry. For the past 11 years, for my sins I ended up in the organic waste process industry, working with waste minimisation and recycling. From 1990 to 1996 I was the General Manager of Bio Recycle, and we managed all of the biosolids at North Head through alkaline stabilisation. We took all of that material to farmland, about 200,000 tonnes.

In 1996 I went off to explore the benefits of small business and started my own company. Committee members would probably guess from that, that I will talk predominantly about biosolids and biosolids management as I see it. I have done a lot of work with Sydney Water. I helped it develop a strategy for biosolids management for the 31 treatment plants, and from 1999 to 2001. Sydney Water has fairly long-term vision and long-term planning. In a sense I was a little disappointed to hear some of the rhetoric and some of the things that have been said.

In the time I worked as a contractor, and as a consultant for Sydney Water, I found it to be very professional and have very good people to work for. They were always fairly diligent and honest. Sometimes they were a little terrified of making a decision because they were worried about the political implications and ramifications. I say that quite honestly. However, it is important to note that we always used to compare waste water treatment plants on the basis of water; and I have heard water talked about this morning as effluent. I heard talk about effluent discharge and the quality of the discharge of effluent.

In 1990 Tim Moore said that we were no longer going to use the ocean as an extension of our toilet bowls. He said that we will start dealing with the solids. We now look at waste water treatment plants as production facilities, producing two streams. One stream is water, and the other is biosolids. Generally there is a third stream, grit and screenings, the largest component of the inert materials captured in the plant. In 1991, when we first started operating a plant at North Head, it was a fairly terrifying place. They were capturing probably less than 9 per cent of the solids coming into the plant. That means the effluent was going out with 91 per cent of the solids.

In those days we used to see the big plume at the cliff face, and that was predominantly because there was very low availability from the incinerator operating at that time. It would break down and the only option was that as the waste came in one door it had to go out the other door, that is into the ocean. In those days there was a lot of media attention and a lot of concern about problems associated with that, so they introduced the ocean outfall to move the solids component of the discharge further out to sea. That would do better diversion, better dispersement.

In those days I remember the Institute of Engineers Australia said that that was the wrong thing to do, because it was taking the food source away from the fish at the outfall. I am told that it definitely spoiled the fishing. The incinerators were closed down in 1991 as a result of public concerns and outcry. The capture rate came up to about 20 per cent and by 1995 the capture rate was up to about 30 per cent. It is probably now up to about 35 per cent.

As a result, the solids keep coming in. They must be dealt with, and they have to be taken out. At the moment the solids are bulked up by about 10 per cent and they are carrying a fairly significant amount of water, which everyone is probably aware of. The Committee has asked specific questions, including evaluation of the options presented to the public consultation. We looked at those options from a professional point of view and we believe that Sydney Water has done the right thing. There is no rocket science involved with thermal drying, it is a well-proven technology and is used overseas.

The Committee asked about examining the scope of options and the provision of decentralisation and devoluming in the system. We have made some comments on that. One of the very important things in the strategy of Sydney Water is that it will devolume, by virtue of the fact that they will capture twice the amount of solids. They will go to about 65 per cent capture as part of the upgrade, but they will devolume by digestion, which is a biological devoluming, back to about 50 per cent of that again. And they will devolume again significantly, obviously through drying.

CHAIR: Like what percentage?

Mr COFFEY: The dry solids are generally about 92 per cent, so you are back to about 8 per cent water. In the first instance it was 70 per cent.

CHAIR: Is that about one-third, roughly.

Mr COFFEY: No.

CHAIR: It goes from 100 per cent down to what?

Mr COFFEY: Currently the treatment is primary. So the solids that come out are called primary and they are dealt with, with alkaline material to get them to a stability which is acceptable for use in agriculture, so it is environmentally safe. At the moment 100 tone of biosolids has 10 tone of lime added to it, so 110 tonnes go off the plant. When that is digested you end up with 50 tonnes, maybe a little more.

The Hon. MALCOLM JONES: What does digest mean?

Mr COFFEY: To anaerobically break down, it is a biological process. Through that process you get methane gas. At Malabar and many treatment plans around the world they run small generator sets with methane gas, which is environmentally sensible because it gets carbon credits and reduces methane discharge into the atmosphere. It gives us green electricity, as well.

CHAIR: When it is dried it goes from 50 down to what?

Mr COFFEY: Down to 15 tonne.

CHAIR: Is the volume the same or much less?

Mr COFFEY: Much less.

CHAIR: Is that done commensurately?

Mr COFFEY: Yes, the bulk density is a little lower, but if you relate it to truck movements. Today we are talking about 12.5 trucks a day, so there are 170 tonnes of stabilised material. You have to remember that we take lime into the plant as well, so there is a truck that comes in with lime and it goes out empty, and then a truck goes out that has the lime as well as the biosolids in it. There is a bit of double handling. Our interpretation is that if you are looking at the year 2020 and you are looking at it with alkaline stabilisation, you are looking at 30 truck movements a day with alkaline stabilisation but, with drying, it will mean about 4.8 truck movements, which is 2.4 trucks, on average, a day.

CHAIR: Does that allow for an increase in total volumes going through—

Mr COFFEY: That is an increase in the volume and digestion.

CHAIR: —as a result of population growth?

Mr COFFEY: Yes.

CHAIR: That is 4.8 per day?

Mr COFFEY: Yes, and that is 2.4 trucks. When a truck goes up and goes down, that is two movements there.

CHAIR: I am sorry to interrupt.

Mr COFFEY: That is all right. I am more than happy to answer questions along the way. In relation to an examination of the integrity of the consultation process, obviously we do not want to make a comment about that. In relation to an evaluation of the implementation of the recommendations related to the treatment of biosolids from previous parliamentary inquiries, I do not think I have the skills to answer that. I am asked to evaluate whether the biosolids strategy is consistent with the consent conditions, and I do not want to explore that. I am also asked to consider Sydney Water's options for biosolids strategies for North Head and I have said that, in our view, the recommended adoption of thermal drying with anaerobic digestion represents the most appropriate technology. This option meets all the strategy objectives. It lowers processing and reduces costs. It lowers operating risks and it significantly reduces traffic impacts and potential odour nuisance on the surrounding community.

Off-site options require increased capital expenditure, increased infrastructure and subsequent increased risk of operational failure. Off-site options may reduce an impact on the community that is local to Manly but may significantly increase the impact on a community somewhere else. I have heard some discussions about Camellia and, while I think that it is a commendable idea, if it is looked at more rationally and if 50 per cent of the stream of what is coming to North Head is taken away and is taken to be treated at Camellia, that plan would be discharging into the Parramatta River where the receiving waters are much, much more sensitive. That means that the quality of effluent discharged would have to be much, much higher, so the processing option then has to become much more complex and even the quantity of biosolids generated will become much, much greater. You are also talking about a great deal many more truck movements.

CHAIR: What about Bunnerong?

Mr COFFEY: Yes. It is an option. It is an option that was explored, I believe, fairly thoroughly.

CHAIR: Were you part of that exploration?

Mr COFFEY: No, but I have read the report and I have been involved in a number of discussions about that report. I guess I would only say that I would have concerns when there is high-pressure pumping. We talk about environmentally sustainable development, so why do we want to move everything around a place three or four times and reprocess it? When you are pumping, you are moving 99 per cent water. If you are moving the solids, so that you are only moving the solids from one place to another, and if you have a failure, what are your options? Do you still build a full-scale processing plant because two pumps fail or because a pipeline fails? There are a lot of other risks that are associated with pumping.

Pumping is a well-proven and a well-used technology. There are places in America where they pump for three, four or five kilometres and possibly up to 12 kilometres, and I have no objection to that at all, but if you have to have a pipeline under the harbour and then through the streets of Bondi all the way to Malabar, I think it

becomes a little bit difficult. Again, you have to build a treatment plant at the other end to process the biosolids from liquid. From the liquid stage you have to get it thickened and then de-watered, then discharge your effluent—presumably back to Malabar so that the loading at Malabar increases quite dramatically, and then you take the solids out at Bunnerong. I can tell you that from a contractor's point of view, in the early 1990s my eyes used to water when I looked at Bunnerong because it is a great opportunity—really fantastic. Get it all there together and treat it in one place and make major bucks, but from Sydney Water's point of view I think it has a lot of problems, especially from North Head. Maybe from Bondi to Malabar is not so unrealistic. Malabar is probably definitely not unrealistic because it is quite a lot closer.

I am asked what is the proposed outcome for 2021 and, generally, the capture rate is 65 per cent, which is a significant improvement. Digesting and drying and 4.8 truck movements a day represents, in my view, an improved solids capture, improved effluent and an improved environmental performance that I think is really quite significant. It will also result in a reduced impact on the community because of the reduction in transport and truck movements and a reduction in odour. There is also a reduced operational cost per dry solid tonne of captured biosolids, which is a definite plus. I think that we all have to keep it pretty clearly in the back of our minds that those costs are still costs borne by the community. We are the ones who pay it. Whatever it ends up costing, it is not Sydney Water that will be paying it. It is us.

We will have improved utilisation of the existing infrastructure of the site. (I have always said that I would like to get a job at North Head because it is one of the best places along the coast.) Improved market diversification for biosolids dry products is a very important part of the whole option and I think there is some discussion about the use of dry biosolids for energy. Dried biosolids are predominantly used in agriculture overseas. There is an option, though, to use them for energy. One of the things that we discussed in the strategy when we were talking to Sydney Water was that it was very difficult when you have all your eggs in one basket and you have only one market option. If it was found that biosolids have an environmental impact—all of the investigations and science to date says that it does not, if it is re-used and if it is done properly in accordance with the guidelines—maybe the agricultural opportunity will not be there. If it is not, what are you going to do then?

It might be used in, say, cement kilns. I am not sure how it would stand up, but it could even be used or be suitable for renewable energy credits in a power station. But, again, building a plant on-site for energy creation from 40 tonnes a day of biosolids I think would be fairly unrealistic because it will be only a very, very small feed. Oil from sludge might be a reality but, again, it is a fairly big investment and it will be probably three or four more years before we know a lot more about that technology. With the upgrading of North Head to improve environmental performance and reduce operational risks, it appears that there will be significantly fewer impacts on the community in 2021 than there was on the community back in 1991 or even as of today. I am saying that in regard to transport, infrastructure and the other issues related to concerns. I know that, having had to deal with community concerns from 1990 to 1995 has been part of the public consultation process.

The Hon. JOHN JOBLING: I have been reading your submission. If I am correct, you are a director of a management services company. Is that correct?

Mr COFFEY: A consulting company, yes.

The Hon. JOHN JOBLING: So your principal objective in this is to do with a marketing, merchandising and management proposition? They are your specialities, I take it?

Mr COFFEY: No, organic waste management—biosolids.

The Hon. JOHN JOBLING: Fair enough, waste management. Just for the record, could you tell the Committee your professional or specific qualifications in the fields of either water, science or environment?

Mr COFFEY: I am an instrumentation control engineer. I have three environmental scientists who work for me and one agricultural scientist.

The Hon. MICHAEL COSTA: Thank you for outlining your expertise. My question goes to Sydney Water's biosolids program. You have had a look at it, clearly. You at least have personal expertise or have access to expertise to assess that program. In terms of world standards, how do you see the program?

Mr COFFEY: I think that we stand up fairly well. I had a colleague here in 1990 from America who walked around one of the treatment plants, came out the other end and said that if it was in America, the operators would be in gaol. There has been a huge cultural change in Sydney Water in the past 10 years and a huge change in

its whole approach and professionalism. I think it is one of the things that brought me here today. I do not have a particular barrow to push. I do not get a benefit out of today. I am here because I am committed to this industry. I work very hard for the industry. Like I said, I am disappointed in what I see as possibly some of the outcomes and some of the rhetoric that I have heard. Sydney Water's biosolids strategies stand up very well internationally and stand up very, very well in Australia—in most other cities in Australia. Even the New South Wales biosolids guidelines are the benchmark in this country for biosolids management.

The Hon. RICK COLLESS: Do you have a nutrient analysis of biosolids? In other words, have you done such an analysis?

Mr COFFEY: Yes.

CHAIR: Would you take the question on notice and provide such an analysis to the Committee?

Mr COFFEY: Certainly.

The Hon. RICK COLLESS: Are you able to provide an estimate of the value, from a fertiliser nutrient perspective, of biosolids in dollars per tonne?

Mr COFFEY: It is a very good question, and it is interesting. I have a lot of colleagues who have PhDs in agricultural science. One of them used to say to me in 1992, when we were putting lime-amended biosolids on land and selling it for the value of the lime, "You need to be careful doing this, Paul; this is snake oil salesman stuff." We said, "Look, a civil engineer just stands at the fence, and when you look over the fence you can see the difference and you see the huge productivity." The nutrient analysis of biosolids is fairly low. But there has not been a lot of work done on the benefits of improving the soil structure, the biota. You are actually taking some nutrient and the water, and there are lots of other components that you take to the soil when you add biosolids.

We have the same problem with compost and green waste. The chemical companies have clearly explained to farmers that the first thing you do is kilos of nitrogen. If you work it out on NPK, on specific nutrient value, it is probably worth $5 or $6 a tonne. On my estimate, if you work it out on productivity it is probably worth a damn sight more. The problem is that we still have not come over this hill of people seeing it as a waste product and farmers saying that they are really providing a respite for Sydney Water to dispose of a waste product. Sydney Water now gets a couple of dollars a tonne for it, which is a contribution. It is part of this whole change in our philosophy. We now have to change from this idea of waste and start looking at these things as a resource, and treat them as the correct resource.

The Hon. MALCOLM JONES: You said that you take 100 tonnes of biosolids, add 10 tonnes of lime, and there is then a process where it releases methane gas, and it then comes down to about 15 tonnes, is that correct?

Mr COFFEY: Yes. When I say 100 tonnes of biosolids, we used to call it sewerage sludge before we came up with the boutique name of biosolids. Biosolids is where it has been processed. Where it has been dewatered and processed, it is dewatered from 4 per cent solids to, at North Head, 30 per cent solids. I apologise; my numbers were wrong, so we need to correct it. The 100 tonnes of biosolids that we started with is 70 tonnes of water and 30 tonnes of solids. We add to that 10 tonnes of lime, currently, and we take 110 tonnes off site, plus we brought the 10 tonnes of lime onto the site, so it is 120 tonnes. The 30 tonnes of solids in the biosolids, when we digest it, comes back to about 15 tonnes. When we dewater it, it is about 50 tonnes—it is still 30 per cent solids—and when we dry it to 92 per cent solids it is about 17 tonnes. So it is 15 tonnes of solids and maybe 1.5 tonnes of water.

The Hon. MALCOLM JONES: And the lime?

Mr COFFEY: There is no lime, because we do not use lime anymore. In the current process, lime is used to achieve what we call grade A stabilisation. Through exposure to a PH in excess of 12 for more than 24 hours and a temperature in excess of 72 degrees for more than 30 minutes, we get what we call grade A stabilisation, so it destroys the pathogens, to the extent where it is acceptable to be used in farming. In fact, they use calcium oxide because there is an exothermic reaction from the calcium oxide to achieve that. So that is a process called alkaline stabilisation, and that is used with the current raw primary sludge to achieve a grade A product for reuse. The option to that, which is the option that Sydney Water is proposing, is to put in digestion, which significantly reduces the volume of solids, and then put in drying, which significantly reduces it again. On notice I could perhaps better explain that, and I will prepare for you a graph and a table.

The Hon. MALCOLM JONES: What is the market value per tonne of the A-grade finished product?

Mr COFFEY: Again, it is related to nutrient and its organic component. A lot of people recognise the organic component. From an energy point of view—

The Hon. RICK COLLESS: Could you tell us what is the organic component of it?

Mr COFFEY: It is essentially 100 per cent organic.

The Hon. RICK COLLESS: It would not be 100 per cent, would it?

Mr COFFEY: 90 per cent perhaps. There are very little inerts in it, because most of the inerts precipitate out as grit; they are larger solids. In the digestive process they end up sitting on the bottom until they clean it. It is $3, $4 or $5 a tonne. In energy, if it went to power, it probably has about 15 gigajoules per tonne, which is about half that of good black coal.

The Hon. MALCOLM JONES: Gigajoules is how many points—to the power of what?

Mr COFFEY: Six. Remember it as gigajoules. I can put it together for you. I think it is important that we understand these things. I came here because I think the practical issues are the really important issues to understand as well; it is not just the peripheral issues.

The Hon. MALCOLM JONES: If the use of these organic pellets becomes widely accepted in the community, what sort of increments in value do you forecast? Or is it simply a supply and demand issue?

Mr COFFEY: I think it is simply a supply and demand thing. Because of the international recognition of the value of reuse in all these resources and not being a one-use society, there is almost a watershed of technologies coming, where people are working on value-adding, biosolids, green waste—nearly all of the different organic components, because organics is the major component of our waste stream, and probably the easiest to deal with—to use them in energy-related processes or agriculture. There are processes in America now where they add urea, formaldehyde concentrate and other nutrients to biosolids and react it, and end up with a high-analysis fertiliser similar to Nutricote, which is considerably better than Dynamic Lifter. But, strangely enough, Dynamic Lifter smells when you spread it on your front lawn, and everyone says, "Gee, you can almost smell the grass growing. This is fantastic." But if it is biosolids, everyone says, "Oh shit, that stinks."

CHAIR: If members have further questions, would you be prepared to take them on notice?

Mr COFFEY: Certainly.

(The witness withdrew)

KATHRYN ELIZABETH RIDGE, Executive Officer, Nature Conservation Council of New South Wales, Level 5, 362 Kent Street, Sydney, affirmed and examined:

CHAIR: In what capacity do you appear before the Committee?

Ms RIDGE: As a representative of the Nature Conservation Council of New South Wales and of the peak environment non-government organisations [PENGOs].

CHAIR: Are you conversant with the terms of reference of the inquiry?

Ms RIDGE: Yes, I am.

CHAIR: If you should consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present should be heard or seen only by the Committee, this Committee would be willing to accede to your request but it may be overruled by Parliament. Do you wish to make an introductory statement?

Ms RIDGE: I refer to the Nature Conservation Council [NCC] document, which I bring to the notice of the Committee today. The Nature Conservation Council has been part of a consultation process that started in May 2000 into Sydney Water's biosolids strategy. This document expresses some of the experiences that we have had during that consultation process and addresses specifically the terms of reference of the Committee.

CHAIR: It is ordered that the document be tabled. Are the Nature Conservation Council and the groups it represents satisfied with the strategy outlined by Sydney Water?

Ms RIDGE: The Nature Conservation Council and the peak environment non-government organisations [PENGOs] believe Sydney Water could and should do a more thorough assessment of the options for biosolids, with reference to the complete waste water and water cycle and to the complete system.

CHAIR: Does the NCC or any of the organisations it represents have any plan or program of any sort as an alternative to the Sydney Water proposals?

Ms RIDGE: Since 1994 the Nature Conservation Council and the peak environment non-government organisations have been consistently lobbying Sydney Water and the relevant Ministers to consider a decentralised approach to the management of sewage and the water supply in Sydney.

CHAIR: Can you provide any details of the decentralised approach that you propose?

Ms RIDGE: We propose that the current NSOOS, SWSOOS and other large sewerage systems be broken down into subcatchments and that each of the subcatchments treat and re-use water and waste water completely within that region. We believe that is consistent with the principles of environmentally sustainable development and will provide the best long-term market opportunities for Sydney Water in terms of waste water and biosolids re-use.

CHAIR: Do you have costings of any of these proposals?

Ms RIDGE: We have had access only to the figures prepared by Sydney Water. The costings that were prepared as part of the consultation process were done in two stages. The first stage was the infrastructure assessment of cost and the second stage was part of the life cycle analysis process. We have had access to all of those documents but we have not had the opportunity and we are obviously not resourced to prepare our own. At no stage did Sydney Water prepare detailed costings of decentralised options for the problem of waste water and biosolids on a subcatchment basis.

CHAIR: You were involved in the consultative process with Sydney Water. Do you believe the options that it presented were real options?

Ms RIDGE: From the very beginning the Nature Conservation Council and the PENGOs had queries about the options presented to us initially as part of the stakeholder consultation process, which occurred in May 2000, and the later consultation process with the public. We do not believe those options presented the full range of options open to Sydney Water and the community to consider and we do not believe they were presented in good faith to the committee—particularly the option involving Camellia as a processing facility.

CHAIR: It would appear from the evidence given by Alex Walker this morning that Sydney Water is locked into the maintenance of the three major sewage treatment plants for the next 20 years at least. Do you think the community will be satisfied with that?

Ms RIDGE: No, I do not. Sydney Water has improved its approach to waste water and water management over the past 10 years, but it has long way to go. Future directions that are emerging internationally for the treatment of waste water show that decentralised approaches stack up very competitively in terms of cost and they also provide far more opportunities for re-use and recovery. We believe Sydney Water has not availed itself of all the information available in the marketplace. It usually offers—as it does its submission to this inquiry—the excuse that those options have not been fully trialled and tested. That response has been a consistent Sydney Water response since 1994 to decentralisation options. There is a number of technologies and proponents who are quite prepared to work with Sydney Water on trial facilities for maximising the re-use potential of waste water.

The Hon. MICHAEL COSTA: What is your personal expertise in biosolids management?

Ms RIDGE: I am a marine scientist, and—

The Hon. MICHAEL COSTA: But what is your expertise in biosolids management?

Ms RIDGE: I have been consulted by Sydney Water since 1995 in a professional capacity about options for not only sewage, waste water and biosolids management but opportunities for water and demand management. The Nature Conservation Council is consulted as a professional body in our area of expertise, which is environmental management and sustainability.

The Hon. MICHAEL COSTA: How is that area of expertise established?

Ms RIDGE: We are the peak body representing more than 125 organisations across New South Wales that deals with a range of environmental management issues. We have scientists who are professionally associated with the NCC and a number of member groups that are very well versed in a range of technical areas, including biosolids management.

The Hon. MICHAEL COSTA: So you claim to have expertise in terms of assessment?

Ms RIDGE: We certainly do.

The Hon. MICHAEL COSTA: In that case, why are you not able to produce an environmental cost benefit analysis of the Camellia project? I note that in your submission you say that you have not been able to do a proper environmental cost benefit analysis of a number of projects or potential solutions to the problem that you perceive because of a lack of resources and a lack of expertise.

Ms RIDGE: No, it is not a lack of expertise. We are a non-profit non-government organisation that works at a peak level with our member groups in the community to advocate better environmental outcomes. We do not have a limitless supply of resources to apply to what we believe to be the responsibilities of government to ensure that it is making wise and effective choices about its expenditure of public money.

The Hon. MICHAEL COSTA: So it is fair to say that at this stage there is no costed analysis of the alternatives. Your organisation proposes that we should look at alternatives to see whether they are viable.

Ms RIDGE: We say that the alternative should have been part of the original decision-making process and that that process should have been effected in good faith.

The Hon. MICHAEL COSTA: You are missing the point. At this moment there are no costed alternatives to the current proposals.

Ms RIDGE: There are in terms of their applications in other parts of Australia and world wide, but not with respect to Sydney Water's area of operations.

The Hon. MICHAEL COSTA: So the short answer is that there are no costed alternatives to the proposal.

Ms RIDGE: That is not a justification for not doing it.

The Hon. MICHAEL COSTA: I will take up that point. We do not have costed alternatives but you say there is no justification for not doing it. So the doing of it is more important than the costing to get an alternative that we can measure.

Ms RIDGE: I mean do the costing properly so that it can assist the decision-making process.

The Hon. MICHAEL COSTA: What do you estimate the cost would be of conducting an analysis of the costs involved in these projects?

Ms RIDGE: Costing the costing is not my area of expertise.

The Hon. MICHAEL COSTA: Has your organisation sought a quote for costing the alternatives?

Ms RIDGE: No, we believe that is part of the professional responsibilities of Sydney Water.

The Hon. MALCOLM JONES: The consultation period is limited to one month, a point that you highlight in your presentation. How much time would you need?

Ms RIDGE: Most of our member groups meet on a monthly basis. So if they receive notification of a consultation process in the middle of the month and a meeting occurred in the first two weeks of the month they would need at least six to eight weeks. That standard has been applied in many pieces of legislation before this Parliament and it is a standard that we hope the Government can apply consistently to future community consultation processes. The Department of Urban Affairs and Planning has prepared, as part of its Plan First consultation document that went out to the community, best practice guidelines for community consultation. We believe that that best practice guideline should be adopted and used by all government agencies, including Sydney Water.

The Hon. MALCOLM JONES: How long is that?

Ms RIDGE: It is 40 days at the moment.

The Hon. MALCOLM JONES: That is only 10 days more than in this document?

Ms RIDGE: It is part of a regular meeting process. It allows people to follow the processes of organisations.

The Hon. MALCOLM JONES: What is the appropriate consultation time?

Ms RIDGE: We have advocated that it should be three months in preference, however, six weeks is the standard being used.

The Hon. JAN BURNSWOODS: Did you hear the evidence of Paul Coffey?

Ms RIDGE: I came in at the end of his evidence.

The Hon. JAN BURNSWOODS: You may have missed some of the detail. I was interested in some of his practical comments in relation to decentralisation and interception. He said that while Camellia sounds good in theory, for instance, discharge of effluent would be into the Parramatta River which is more problematic in most people's minds than discharge into the ocean. That, in turn, would be a substantial cost to make sure either that there was no discharge or that the effluent was treated to a much higher level. He made a number of comments of that kind about Camellia and Bunnerong. I do not have his expertise but his next comments were about where there may be proposals to use biosolids as a source of energy, there are clear disadvantages with lots of small plants as distinct a fewer number of large plants. What do you say about those practically oriented arguments against the concepts of decentralisation and interception?

Ms RIDGE: I will address that question by referring to the "Life Cycle Assessment of Biosolids Processing Options" prepared by Gregory Peters from Sydney Water and Dr Svenlandi from the Centre for Water and Waste Technology at the University of New South Wales. In the assessment they supplied to Sydney Water they say:

> The centralised system under study would use significantly (47 per cent) more energy than the decentralised system. This is the consequence of the choice of drying and pelletising technology in the centralised system instead of lime amendment which is used in the decentralised system.

I am happy to provide the document.

The Hon. JAN BURNSWOODS: That is current technologies?

Ms RIDGE: These are the technologies that Sydney Water was using as its options. This report was prepared for Sydney Water on the options that were used for the community consultation.

The Hon. MICHAEL COSTA: My understanding is vermiculture is not an established biosolids processing technique and that report was dealt with on that basis by Sydney Water. I will take a look at the report.

Ms RIDGE: The vermiculture process is not referenced to in this report. This refers to the energy needs of a centralised system versus the decentralised system.

The Hon. JAN BURNSWOODS: What do you say about Mr Coffey's comment about using the Camellia site for any discharge into the Parramatta River and the cost of providing fail-safe techniques for either preventing, controlling or doing something with that effluent?

Ms RIDGE: That obviously would be an issue that would greatly concern the peak environment non-Government organisations [PENGOS] and the Nature Conservation Council.

The Hon. JAN BURNSWOODS: But that is in addition to what you just said which was limited to energy?

Ms RIDGE: That is right. The community is considerably concerned about water pollution and Sydney Water and the Government have spent a lot of money during the past 10 years improving the water quality in the Parramatta River and the Sydney Harbour catchment. We would not like that clear direction from government reversed in any way. We are advocating decentralisation and re-use—not throwing it back into the river system—and viewing that as a valuable resource which can be used in industrial areas very effectively. We do not believe that the full market potential of that re-use on a sub-catchment level has been explored properly by Sydney Water.

The Hon. MICHAEL COSTA: Do you have any work on that?

Ms RIDGE: Yes, I do.

The Hon. MICHAEL COSTA: Can the committee have that?

Ms RIDGE: Yes.

The Hon. JAN BURNSWOODS: Does that you do not, for instance, support the notion of a 300 kilometre pipeline over the mountains? You are talking about local areas?

Ms RIDGE: That is right, on a catchment basis.

The Hon. JAN BURNSWOODS: Why do you oppose the idea of a 300 kilometre pipeline over the mountain?

Ms RIDGE: I want a life-cycle assessment and sustainability report prepared before I make a final decision on that. From the preliminary options presented to us by community engineers, on a voluntary basis, the energy and costs associated with a 300 kilometre pipeline over the top of the mountains are prohibitive. We believe that processing on a sub-catchment basis in outer Sydney provides great advantage in terms of transport to the key markets for biosolids re-use and application.

The Hon. MICHAEL COSTA: Do you have for the committee a detailed analysis of all of that?

Ms RIDGE: I have got the analysis of Sydney Water on biosolids marketing strategy.

The Hon. MICHAEL COSTA: I have already seen that. Has the Nature Conservation Council done its own analysis?

Ms RIDGE: We do not prepare detailed analysis or socioeconomic studies on options that the Government has.

The Hon. MICHAEL COSTA: How can you make judgments about particular issues?

Ms RIDGE: We assess the information that is provided to us. We make very clear where options and opportunities have been missed. We get expert advice from academics in the field who know what is happening internationally and in Australia, such as Dr Stuart White from the University of Technology, the Institute for Sustainable Futures. We avail ourselves of a lot of expertise in our assessment, thank you.

The Hon. MICHAEL COSTA: We are talking about a specific program undertaken by Sydney Water in relation to dealing with biosolids. You purport to have alternatives to that particular approach. I have asked you for some analysis that enables us to compare what Sydney Water is currently doing with what you propose. Is your response that you do not have details and all you have done is made commentary on what is available through Sydney Water?

Ms RIDGE: You must have misunderstood me. There are a number of options that Sydney Water has not considered as part of its analysis and we believe that Sydney Water and the New South Wales Government should clearly inform themselves of what those options mean in terms of economic outcomes and future sustainability of the Sydney region. We do not have the resources to do that in any detail.

The Hon. MICHAEL COSTA: At this stage in relation to the possible alternative options that you have argued there is no detailed analysis?

Ms RIDGE: There is information which I will provide to the committee on the implementation of those options elsewhere in the world.

The Hon. MICHAEL COSTA: The short answer to my question is "no"?

Ms RIDGE: That is right, and it is not our practice.

The Hon. JAN BURNSWOODS: In relation to the 300 kilometre tunnel you said that you had grave concerns about its cost and energy use. Do you also have concerns about the raising of the water table, salinity and so on if that amount of re-used water is to go west of the mountain?

Ms RIDGE: We would have to look at the environmental impacts of application of water and biosolids.

The Hon. MICHAEL COSTA: I thought you said you do not look at those issues?

Ms RIDGE: We do. We are not in the practice of going out and preparing independent economic or environmental analysis on government strategies. What I said earlier was not that we had grave concerns about it, I said on the independent voluntary submission that was made to us by a retired engineer we had some concerns about the energy aspects of that, and we would like to see a full life-cycle assessment and some socioeconomic data before we make a final decision. When you apply water, whether it is reused water or freshwater, to dry landscapes there are associated environmental impacts, such as salinity and rising watertables, as you have mentioned. We would obviously require full environmental impact analysis to be done before we could sanction that use.

The Hon. JAN BURNSWOODS: Are you aware whether anyone has looked at those issues in relation to these proposals?

Ms RIDGE: I am aware of studies that have been done in the United States on reuse and in the European Union, which are mentioned in Sydney Water's Biosolids Residual Management Strategy, which you have a copy of. That actually goes to a point that was made by the gentleman who were sitting here previously about problems associated with the use of biosolids as fertiliser and compost. What this document refers to, which is clearly the direction in the European Union, is to greater composting of biosolids and, in particular, combining biosolids with other products, such as, sawdust and wood waste, to provide a much better quality product so it is more suitable for reuse.

The Hon. JAN BURNSWOODS: My question is also about water rather than biosolids. The reason I referred to watertables is because of other issues about the actual liquid as distinct from biosolids. As far as you know, have any studies been done in that area?

Ms RIDGE: Plenty of studies, such as a study by Dr John Williams, have been done about leakage in Australian natural landscapes from irrigation water. I am happy to provide them to the Committee.

The Hon. JAN BURNSWOODS: But not about the impact of, for example, turning the liquid content of Sydney's sewage and tunnelling it over the mountains.

Ms RIDGE: There is in the context of US and European examples, but not, that I am aware of, in the context of the Australian landscape.

The Hon. JAN BURNSWOODS: When you went on to talk about sawdust, I thought you were talking about the biosolids.

The Hon. JOHN JOBLING: I have basically one question that I would like some assistance with. Bearing in mind the lateness of the receipt of the document and its content, which we may quote or use, one paragraph causes me a deal of difficulty. The paragraph states:

> Further, the analysis of the community consultation which was produced represents a cynical manipulation of the feedback the groups provided, even given the time constraints. Comments were distorted and categorised inaccurately, particularly where they raised issues of decentralisation, water quality and alternative technologies.

Given the serious nature of that statement and, unfortunately, a total lack of evidence in this document to support such a statement, where is the evidence to support your statement? Why did you not supply evidence with what is a provocative comment?

Ms RIDGE: The Nature Conservation Council was asked to appear before this Committee on Wednesday afternoon. That is why the document does not have such supporting evidence. I would be happy to take that on notice and provide you with that evidence within a week. I can refer to it here, if you would like.

The Hon. JOHN JOBLING: You should refer to it because media may be present. There are a series of specific criticisms. You say there was deliberate manipulation. That is almost accusing them of criminality or total misconduct. Such comments cannot be left to stand even at this stage. They either need to be qualified or withdrawn or the evidence put on the table. Even supplying it a week or a day later is not a good process.

Ms RIDGE: Sydney Water in its community consultation process took the submissions from the community, including their concerns about the options that were presented and the lack of options in terms of decentralisation, and bundled them up into categories. Decentralisation, which is fundamentally a question about sustainability, was categorised as "community or other" as part of the consultation process. The community's key concerns about issues such as water pollution were also bundled up. We do not believe that that adequately reflected the community concerns that were provided to Sydney Water through the submission process.

We believe that the community's concerns should have been calculated in terms of how many people responded on each particular issue. Sydney Water in its report back to the community, to the board and to us as stakeholders said in response to that request that this is not a plebiscite process, this is not about votes for or against. We believe that bundling up diminished the message the community was giving to Sydney Water and to the Government. That is why we believe there has been a manipulation of that information, because it was never provided in its raw form. One of the key questions for this Committee is to get access to that raw data.

The Hon. JOHN JOBLING: The argument that you are putting to me is that you do not agree with a process and you are offering a personal interpretation. You have not offered me any evidence to sustain the words "cynical manipulation". I believe you have gone through an emotive exercise to try to stress your views.

Ms RIDGE: They are the views of the PENGOS, not my personal views.

The Hon. JOHN JOBLING: You have had time to meet with them within the month to produce all those results.

Ms RIDGE: I circulated this document as soon as I prepared it, which was last night. I had one response which said that they did not have one letter.

The Hon. JOHN JOBLING: Basically it is your view in this document. You have signed for it.

Ms RIDGE: I have signed for it. I have consulted the PENGOS on the contents of that document. It was also part of the PENGOS original submission to Sydney Water as a response to the community consultation report, which was given to us.

The Hon. MICHAEL COSTA: Can you produce the evidence?

The Hon. JOHN JOBLING: I look forward to the evidence, but I remain totally unconvinced.

Ms RIDGE: We still have not had access to the raw data. That is something only the Committee can provide.

The Hon. JOHN JOBLING: How can you make the statement if you have not had access to the raw data? If you qualified it carefully and made the comments on some other basis I could have happily said I look forward to the information. But I have problems with its and I flag it.

The Hon. JAN BURNSWOODS: May I ask one more question? Ms Ridge, as you know, this inquiry was set up last year. Why did the Nature Conservation Council or any of the peak environment groups not make a submission?

Ms RIDGE: We did not make a personal submission because we made a previous submission to the preparation of the strategy and we endorsed the submission made by Mr Barr.

The Hon. JAN BURNSWOODS: You did not send us a submission or a letter stating that, nor did any of the PENGOS that you are here representing, is that correct?

Ms RIDGE: That is correct.

The Hon. JAN BURNSWOODS: Can you tell us why? If it is as important as you tell us, I find it hard to understand why this whole inquiry attracted only 17 submissions over a period of one year or more. Given, as the Hon. John Jobling said, the emotive language you have used and given the fact that the inquiry began last year, I find it hard to understand that none of the numerous groups you represent saw fit to make a submission to this inquiry.

The Hon. MICHAEL COSTA: It was not a priority.

Ms RIDGE: We have made submissions to this process over a long period of time.

The Hon. JAN BURNSWOODS: Not to this inquiry.

Ms RIDGE: That is right. We have made submissions to Sydney Water. We have made our views very clear. We have been working with the Manly community on this. We read the Manly community submission, which was produced before this Committee by David Barr on their behalf, and we agreed with it. We did not think that we could add much value to that very detailed submission because we agreed with it completely.

The Hon. JAN BURNSWOODS: May I suggest in everyone's interests where that might be the case in the future that someone write a letter stating so. Clearly at this stage it is a very late piece of information for us to have to weigh in our deliberations.

Ms RIDGE: Thank you.

CHAIR: Time has run out. Thank you very much for coming to give evidence.

Ms RIDGE: Could I refer to the information that has been provided by Sydney Water as part of its submission to this inquiry? It addresses Mr Jobling's point about how the information was collected or collated.

The Hon. JOHN JOBLING: I suggest that you put it in your submission which you will be sending to us.

Ms RIDGE: In the meantime I would like to refer the Committee to that information because it makes clear the point I was making. Could I clarify which documents I referred to the Committee needs?

CHAIR: You can discuss that with the committee director.

(The witness withdrew)

JOSEPH BERTONY, Consulting Engineer, 59 Ida Street, Hornsby North, affirmed and examined:

CHAIR: Mr Bertony, in what capacity are you appearing before the Committee?

Mr BERTONY: As an individual.

CHAIR: Are you conversant with the terms of reference for this inquiry?

Mr BERTONY: To some extent, yes.

CHAIR: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee will be willing to accede to your request. However, Parliament may overrule that. Do you wish to make an introductory statement?

Mr BERTONY: Regarding the aspect of Sydney Water's disposal of waste, the tunnel, the Manly problem, and so on, these are matters of too small a scope to be of any value in the long term. However, the aspect of the bulk of the waste in Sydney today, and what it will be in the next few years, is of sufficient interest to the industry to be the object of what we call a design-construct-own-operate project, which will make it economical and feasible. The preliminary study which I have run in conjunction with one of our large construction contracting organisations shows that, if you take a 30-year cycle, the project will pay for itself within about 20 years. So those are the economics of it. A lot of people are interested in the detail of process and so on. That is not very relevant because there are many such processes to pick up from. But, first, I am an engineer developing technology.

Recently developed pumping technology represents very large savings in power and in cost. The study done by us and that done by Sydney Water arrived at the same value, of around $4 billion or $5 billion, to take the old system across the mountain range and so on. On that project, our system will save probably around $1 billion in the establishment cost. In running cost, it will save 50 to 60 per cent in power demand. So this starts to make the project economical and viable. The figure we have for running costs and so on corresponds vaguely to what the system is collecting from the customer. Not much cost is involved today in the business world. It is the financing, where the money comes from, where the money goes, et cetera. That is my presentation.

CHAIR: Are you suggesting that the sewage is pumped over the mountains to some part west and treated there?

Mr BERTONY: Yes.

CHAIR: You say it would cost $4.4 billion?

Mr BERTONY: It depends on a lot of things, but it will be between $3 billion and $4 billion, yes.

CHAIR: What benefit would that be compared to the current system? Why would we spend this money?

Mr BERTONY: First, instead of putting the water into the ocean, you put it inland where it might be required, in particular when you have to feed the future increasing population and so on. That represents a big advantage. The other advantage is the opportunity to create an ancillary industry like fish farming and agricultural facilities, et cetera. Our view is that it is valid.

CHAIR: If this proposal were to be taken seriously, Sydney Water would not build facility, would it?

Mr BERTONY: I have a view. We have discussed that. From their point of view it is very difficult because they are not in the market for such things. They are, after all, a government body and it has some political constraints as well as social constraints that a private organisation would not have. There are some environment concerns, but they are not without solution.

The Hon. MALCOLM JONES: Given what you have said, if this could be achieved and it could pay for itself over 20 years, it would be a fantastic asset. You have not given us a submission. Is it possible for you to devise figures, assumptions on what you have based your claims to date?

Mr BERTONY: You have a one sum figure. I have a one sum figure.

The Hon. MALCOLM JONES: We have a presentation on this.

Mr BERTONY: There are serious commercial constraints to start with to provide the figure, then the other argument is that on a project of that scale these figures are, to some extent, fictitious because we are able to make an assessment based on experience of certain value and to put the figure against that.

The Hon. MALCOLM JONES: Before anybody could look at such a proposal of such a huge size, we would have to have something a little more than a simply an idea.

Mr BERTONY: Not really because from past precedents we will supply the money. It will not be other people's money. We will supply the funding and we will use our financing as we use in normal operations like that, we will leave it to pay it off in a certain period of time, like you build an airport, road or whatever.

The Hon. MALCOLM JONES: But you have said that this proposal could pay it self off in 20 years?

Mr BERTONY: Yes.

The Hon. MALCOLM JONES: But you have given us nothing to substantiate that claim.

Mr BERTONY: That is one of the aspects that perhaps must disturb a lot of people.

The Hon. MALCOLM JONES: But you want us to take it seriously?

Mr BERTONY: I do not ask you to take me seriously.

The Hon. MALCOLM JONES: You do not?

Mr BERTONY: No, I do not ask anybody to take me seriously.

CHAIR: Have you been involved in such a project anywhere before?

Mr BERTONY: I have been involved with a lot of industry projects, and sufficiently successfully, yes.

CHAIR: But such a project?

Mr BERTONY: Not in such a project, no.

CHAIR: Where do you get your figures from for proposing $3 to $5 billion?

Mr BERTONY: Because there is a certain amount of pumping, pipeline, power generating, et cetera, and fossil fuel to build a fishpond, et cetera, and to put money against the cost of it and to put money against the possible revenue of it, and that is an exercise that an engineer would do almost every day for various projects. You build them or you participate or you create them or whatever. That is a simple function.

The Hon. RICK COLLESS: You say that you can reduce the running costs by up to 50 or 60 per cent

Mr BERTONY: Yes, we do.

The Hon. RICK COLLESS: What sort of technology are you using?

Mr BERTONY: I developed some pumping technology and patented it, which I have had taken over by Abigroup Ltd. They have the world exclusive licence. We have two submission in also. We have been invited to supply, and I will give you an example. Some 1,500 cubic meter pumps to replace existing pumping by centrifugal pumps in manufacturing, where we needed 1.4 megawatts we will now need 0.6 megawatts. That is the difference. The difference is a lot of money. That is the basic of our economic viability on the transfer, but there are other aspects as well.

The Hon. RICK COLLESS: Getting back to the question that the Hon. Malcolm Jones asked about the 20-year pay-off period, what sort of figures are you expecting to generate?

Mr BERTONY: If we had to put a tunnel through the mountain we will probably have two pipelines of two-metres diameter, and most of the process can be transferred into the pipeline. That means you are saving a lot of infrastructure costs as well. The basis was on the quantity which we took from the report and basically it is a quantity, the water that we can work away from the sludge, the water we can use and the marketing we can do with that and so on indicate a saving.

The Hon. RICK COLLESS: I would like to see some analysis of your figures as well.

Mr BERTONY: We are trying to complete the submission in the future and give this matter to the interested party. One of the difficulties with that is, like you, there are many different opinions and you have to accommodate quite a lot of different views. Probably, that is the other part of the thing. But they think it is quite shipshape enough. In effect you have a situation where the world changes so fast now, the population will change, the demand will change much faster than people imagine. Then it will become almost, in my view, a priority.

CHAIR: Which companies would be capable of carrying out this project? Do you have any idea?

Mr BERTONY: The company I work with on that, which is Abigroup Ltd.

CHAIR: You work with Abigroup?

Mr BERTONY: Yes.

CHAIR: Do they own you, or are you an integral part of that company?

Mr BERTONY: No, I am not a part of the company. I am a consultant to the company. But they are the licensee of the technology I have developed. They have exclusive licence on my technology.

CHAIR: So the group that might wish to tender could be Abigroup?

Mr BERTONY: To tender?

CHAIR: If they wish to tender for the project?

Mr BERTONY: Probably, yes, we could, yes, we could contemplate that, yes. It would be more appropriate to build that as a sort of alliance type.

CHAIR: Is it possible for you to provide more detailed information about your proposal to the Committee?

Mr BERTONY: I will refer to these people at their commercial discretion.

CHAIR: We will not be able to use your evidence unless we have more detail. You are just one person making these suggestions and you do not have any detailed evidence to back them up.

Mr BERTONY: That is possible, but it is not a big concern of mine.

(The witness withdrew)

(The Committee adjourned at 1.12 p.m.)