

**REPORT OF PROCEEDINGS BEFORE**

**ENVIRONMENT AND REGULATION COMMITTEE**

**INQUIRY INTO THE MANAGEMENT OF DOMESTIC  
WASTEWATER**

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**At Sydney on Thursday 22 March 2012**

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**The Committee met at 9.20 a.m.**

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**PRESENT**

Mr C. S. Patterson (Chair)

Mrs T. Davies  
The Hon. T. George  
Mr J. T. Parker  
The Hon. C. M. Tebbutt

**CHAIR:** Thank you for attending the public hearing of the Committee on Environment and Regulation Inquiry into the Management of Domestic Waste Water. The purpose of this inquiry is to examine matters relating to localised contamination caused by effluent discharge, particularly in food production areas, as well as the adequacy of regulatory oversight, inspection procedures and pollution notification processes in relation to on-site sewerage management systems. Before the taking of evidence I remind everybody to switch their mobile phones off as they can interfere with the Hansard recording equipment. If your phone is on silent please switch it off completely.

**PHILLIP MILTON GEARY**, Associate Professor, School of Environmental and Life Sciences, University of Newcastle, affirmed and examined:

**CHAIR:** Thank you for appearing before the Committee today. Before we proceed with questions do you have any questions concerning the procedural information sent to you in relation to witnesses and the hearing process?

**Professor GEARY:** No, I do not.

**CHAIR:** In what capacity are you appearing before the Committee?

**Professor GEARY:** As a private citizen.

**CHAIR:** I draw your attention to the fact that your evidence is given under Parliamentary privilege and you are protected from legal or administrative action that might otherwise result in relation to the information you provide. I also point out that any deliberate misleading of the Committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Before we commence with questions, would you like to make a brief opening statement?

**Professor GEARY:** Yes. Thank you for the opportunity to present evidence this morning. I do this because, as a private citizen, I am interested in the nature of the Inquiry. I have been involved in the industry for 25 years and I have observed a number of things in relation to standards in New South Wales and other States in Australia. As I have said in my submission, I think New South Wales needs to improve regulations in terms of on-site waste water systems. Our estuaries are under threat and that is not just from on-site waste water systems but from agricultural run-off and stormwater run-off after heavy rainfall. It should be pointed out that, over the last 20 years, at any one time we have had an estuary in New South Wales closed to oyster harvesting, resulting from some contamination event. Given the fact that we have an industry which is viable and important to the State, I do not think that the industry should be having to deal with these contamination issues. Some of that contamination may emanate from human sources and while this may be of low risk and rare, it does happen. It has happened that we have had oysters in New South Wales contaminated with a human virus and the consequences of that, for both the public and the industry, are dramatic. It seems to me that the frequency with which we are having these contamination events is increasing and I think the manner in which we manage activities on the land needs to be dealt with.

**CHAIR:** In your submission you note that the silver book was drafted in 1998 and was revised but not completed in 2003 and that it is significantly out of step with developments in the industry that have taken place since. What are the key features of the silver book that need to be improved and what developments have taken place in the intermittent years that a new or revised guideline would need to consider?

**Professor GEARY:** I have been critical of the silver book and I think that will crop up because I am not the only one who is critical of it. The book, when drafted, had a number of substantial errors in it that would need to be corrected. It is, after all, only a guideline so it really is there for information. It is not a code of practice—it is not a document that actually outlines how to do something. In my view, it contains a lot of superfluous information which is not absolutely necessary to the design and operation of an on-site waste water system, so it is not helpful in the design of systems. I think the revisions that were done in 2003 are out of date now. In New South Wales we have been operating from a document that is now over ten years old. Other States have managed to revise their codes of practice. The new version of the Australian-New Zealand Standard, which deals with this issue has been released. The relationship between the New South Wales Guideline and the Australian Standard is unclear. Some regulators in New South Wales refer to the Australian-New Zealand Standard 1547 in preference to the New South Wales Guideline but the relationship between the two is not clear in the silver book or the New South Wales Guideline. I think that needs to be substantially revised because it is out-of-date and contains errors of fact.

**CHAIR:** If I could pick up on that point, as you have stated, the silver book is just a guideline. In your view, is a guideline sufficient or should there be an enforceable code?

**Professor GEARY:** I think based on my experience and what other States do, there should be an enforceable code. Otherwise how can you regulate, how can you penalise, how can you improve the standard?

Essentially what we are talking about is improving the standard of the industry with respect to initial design and with respect to installation and monitoring and ongoing performance.

**Mrs TANYA DAVIES:** You just mentioned that the Australian Standard 1547 was recently released, just two weeks ago. Is that the standard that was last prepared in 2000?

**Professor GEARY:** That is correct.

**Mrs TANYA DAVIES:** Have you had a chance to examine the new version of that standard?

**Professor GEARY:** Not in any detail and I am really not in a position to comment on that. I was one of the authors of the 2000 standard but I have not really gone through the revised version to comment on the differences from that and the 2000 one.

**Mrs TANYA DAVIES:** Because you were mentioning that the relationship between the silver book and the 2000 standard needs to be clarified and certainly there are a lot of differences, but with that standard having now been updated there could be even significant changes in that standard that we would need to compare against.

**Professor GEARY:** I think the situation in some States is that they defer to the Australian-New Zealand standard. In other States they have their own code, but it is the same issue. There needs to obviously be some sort of consistency there between the documents that exist.

**Mrs TANYA DAVIES:** That leads me to the next question. You have mentioned the States having different standards or different practices. In your opinion, based on your expertise over the last 25 years, what jurisdiction do you think has the best model—even going internationally if need be?

**Professor GEARY:** As you probably know, it is a joint Australian and New Zealand standard. What it aims to do is to deal with the conditions because an important consideration in anything that we do are the site and land capability considerations. So the document as it exists now attempts to deal with conditions in New Zealand and Australia and they are vastly different. I suppose Australian conditions being different to New Zealand, it is possible to argue that some of the States have different conditions to other States; but given the history of this field and the development of States in Australia, it is not surprising that the States have their own codes. I think the Australian Standard 2000 version was a good document. I think there were things that could have been improved and I am hopeful that they have been improved in the 2012 version that is out now, but I cannot really comment on that. Certainly from my perspective I get to see codes of practice and State guidelines elsewhere in Australia and I have no hesitation in saying that New South Wales is behind the eight ball.

**Mr THOMAS GEORGE:** I think it on was page 3 of your submission that you noted that some councils have procedures for ongoing inspections. Are there any councils that you believe could be used as a good example?

**Professor GEARY:** In New South Wales I think we would clearly see high-risk areas and those areas are in the populated areas along the coastline where we have aquaculture and we have a lot of development, so some of the coastal councils because they have a population base substantially higher than some of the western councils. I do not wish to say names but there are some north coast councils that do a better job than others. I think one of the issues about regulation in New South Wales is that we do have various interpretations by different councils as to how to go about this. You can cross the council border, for example in your area up on the far north coast, and you can see things applied differently across the council border. There are some councils that do better than others.

**Mr THOMAS GEORGE:** I appreciate that you probably do not want to single councils out, but I did not know whether you would see one as a best practice that could be used as an example to other councils.

**Professor GEARY:** As I said, a lot of councils do things in their own way. The issue to me has been always one of resources including staff who firstly are trained and able to do this work. Clearly there are a lot of people out there who do not have much of an idea when it comes to approving what actually goes in the ground. So training is quite clearly an important issue but, as I said, so is resourcing. Some councils may have a lot of systems but they do not devote enough resources to manage them and there is always the issue of fee for service and inspection and approvals and those sorts of things. I do not think governments generally have been prepared

to accept the backlash because when this has been tried before people in rural areas talk about the "dunny tax" or they claim they are being impacted because they are poorer and they live in rural areas. But we do not question this in an urban environment. We just expect that we will have a regulatory body, we will pay rates to that body and they will manage our wastes.

The perception in the rural, unsewered areas is that you get an approval to do something and you do it for life and you do not have to worry thereafter. So the cost is on the environment. I think in these areas certainly there is a backlash, there is no doubt about that. People do not like having to pay for particularly waste but certainly they do not like to have to pay for something which is a septic tank, for example, so not a lot of money gets spent on that. Then the ongoing management of that is something they do not want to suggest that they would like to pay either. I think the question of resources has to be addressed by councils, fee for service, maintenance, having accredited people who do the maintenance and reporting. All of those sorts of things have to be improved because the real situation is that many of those places that currently have onsite wastewater systems are going to remain that way, they will not ever be sewerred. There is not an opportunity, we do not have as much money as we would like. In these areas we have to improve our game.

**CHAIR:** In summary, are you basically saying with councils that it is a composite factor of potentially lack of funding or lack of understanding or lack of political will, or what in summary would be the issues we may need to address with local government?

**Professor GEARY:** I think one of the things is that people do not regard it as important enough. It is only important when there is a public health issue and when something happens. But the example is someone who is building a house and they spend all their money on the design. They get an architect in. They get it built. The last thing they think of is the waste management system. When it comes to occupying the house they want to occupy it and they might put something in the ground but they do not have the landscaping done for the effluent irrigation. So it is just one of those things that even at an individual household level or at a council level is something that is not as high profile as other things, so waste management has to be lifted in terms of its importance.

**Ms CARMEL TEBBUTT:** You mentioned at the beginning that our estuaries are under threat due to a number of factors. One of the difficulties I have when we talk about this topic is getting a feel for the size of the problem and how much is attributed to onsite sewerage management problems and how much is attributed to agricultural runoff or stormwater runoff. Can you give us a feel for the size of the problem that we are talking about and what the real potential is for, say, food contamination?

**Professor GEARY:** If you remember two weeks ago we had that very heavy rain. If that was up and down the coast every estuary in New South Wales would have been closed to commercial oyster harvesting because there are thresholds or triggers that would have been exceeded by that amount of rainfall. That is just simply because the fresh water comes in and that contaminates the land. So the estuaries dilute and the increase in the number of bacteria may have an impact on the aquaculture in those estuaries. As a consequence, the estuaries are closed to harvesting. At some point later they open to harvesting when the water quality improves.

We do monitoring of that water quality. We do it from a point of view of looking at bacterial content but what we are really concerned about are viruses. If those viruses come from humans, hepatitis is a good example, then we may have a serious problem. But we do not do any work monitoring for viruses; we just take a risk assessment approach and we say if there is bacteria present there may be viruses present. The way we deal with bacteria is that we deplete the oysters and put them in an ultraviolet bath for a period of time before making them available, but that does not do very much for the viruses if they happen to be present. The difficulty in monitoring for viruses is that it is hard, it is expensive and it is slow. What we need to do is to look at other indicators that might be as useful.

Just getting back to your question, our estuaries are under threat, some more so than others. But I think it is a terrible indictment in New South Wales, for example, to have two estuaries permanently closed to oyster harvesting. Maybe in those places they should not be there, but the point is they have been closed because of contamination. Trying to determine the contribution that human waste makes to that is very difficult. In many cases our sewerage treatment plants have discharge points. I am not saying that they necessarily contribute, but it is the diffuse sources from onsite wastewater systems that may be contributing some load to the estuary. But it is extremely difficult to tell because if we use bacteria as our indicator, they can come from humans or they can come from animals. Certainly I think the majority of our estuaries are contaminated by agricultural waste, but there may be a human component in there.

**Ms CARMEL TEBBUTT:** I do not know if this is possible, but as a follow-up question do you see that the bigger problem is in design and installation of systems or more in the ongoing maintenance and monitoring to recognise problems and address those problems, or is it all of the above?

**Professor GEARY:** I think the last thing: it is really all of the above. Best practice management means that you assess the site or the location and you design accordingly and you try to anticipate how big it has to be based upon the volume that you are dealing with but also the site conditions. I do not think there is any doubt that a lot of the problems that we have are a failure to consider those conditions years ago because there are in many cases places that should not have been developed or had these systems put in. That is just history now. But certainly improving design. Installation is another aspect of it but of course there is the ongoing, and I do not think we do that well enough either. The maintenance side of things, it depends on the type of system. We have some systems that are passive and others that are active in that they are actually a small treatment system. We do need to do better in terms of the maintenance and the monitoring. We need to have people who are trained. We do have, I guess, some people who work in the industry but the thing is that across the board we need to do this better.

The assumption that because it has been put in it is going to work forever, the homeowner generally tends to think that that is the case. And I mean really what is the incentive for them to report that something is not working, because it is only going to cost them money. So there has to be a regular follow-up and reporting system and it has got to be done properly rather than reports just filed by the council. It has got to be on fee for service too. There has to be a cost to the community if they are going to live in these places. I do not want to be too negative about that, but realistically it has been much cheaper to live in these sorts of places and expect that the cost associated with your activities is borne by the environment. Whereas if you lived in Sydney, or any other urban area, then it would be a fact of life that you would pay to have your waste managed properly.

**CHAIR:** In the monitoring programs for estuaries you have said how hard and extremely expensive it is to monitor viruses and for that reason you do not do it. In your expert opinion, do you see that there is a need to do so? Do you think that the fact that it is extremely hard and extremely expensive is a reason not to, or do you think that we have erred in that regard?

**Professor GEARY:** Well, if I can talk about the monitoring that we do; that is primarily paid for by the oyster farmer and would be an impost on the oyster farmer. Bacterial testing is done because it is an easy indicator and cheap to do. We, and New South Wales, are not very good at viral testing. Many of the samples that were collected by the FoodSafe people were sent to New Zealand for analysis. It is some months before the results are back and there is quite a cost. If we do look at viral testing then I do not think the cost of that should be borne by the industry. Realistically—I do not know whether you are talking to anyone from the industry—the industry is dealing with contaminants from the land and they have no control over activities on the land. Imposing further costs from viral testing would be unfair. I am not saying viral testing does not need to be done in certain circumstances but other testing and indicators need to be developed and would be helpful in this regard.

**CHAIR:** Further to that point; with it being an impost on the oyster farmer you are potentially recommending that, yes, if it is required there may need to be Government intervention in certain circumstances. That is where you see the industry needs to head?

**Professor GEARY:** I think so. The industry struggles. Essentially they deal with problems that are not of their own making. If we wish to have a viable industry in some of the estuaries we have to look after them. There are a number of estuaries that are unsuitable because of contamination and associated urban development and the industry accepts that is the case. We as a State like to have clean water and fresh oysters.

**Mr THOMAS GEORGE:** Further to your comments about the time it takes to test for viruses: Is it similar to a human situation where you have a virus and it takes such a long time to get the result back following testing you are better by the time you have a result—could that be the situation?

**Professor GEARY:** It could be that you are better or you are very ill. Yes, that is the realistic situation. One of the other issues associated with testing is that if you find the virus present it does not necessarily mean that it is infective. It is not conclusive in that sense. That is one of the things that we recognise. There is that small risk associated with it. If we follow best practice in that industry we do not harvest during high rainfall events. We make sure estuaries are appropriate and we depurate—put the oyster through a clean bath. If the

viruses happen to be present that is not going to do much for them. That is a very tough question; the viral question is a difficult issue for the industry to face.

**Mr THOMAS GEORGE:** The fact that you have to send it to New Zealand for testing, is that a reflection on our attitude here in New South Wales or Australia?

**Professor GEARY:** We do not now send it to New Zealand. We have testing facilities in South Australia. But, yes, I think it is. New Zealanders pride themselves on their natural, clean environment and primary industry is pretty important to them. Maybe it is.

**CHAIR:** I have one final question. You strongly advocated for fee for service: Is that a recommendation where you believe the impost should fall on the consumer or the individual? You are saying that clearly it should not be borne by the wider community. People with on-site sewage management systems [OSMS] need to pay for that privilege and service so the impost is not on local government: What are you advocating there?

**Professor GEARY:** I am advocating that if you have a regulator to approve and inspect that system or if you use a privately certified person then you would be expected to pay. There would be an expectation that person and the local council person would be adequately trained. I think there is a need to improve that side of things to a large degree. There should be a fee for service because you are using the land area to deal with your waste. By definition it has to stay on the land area you have and if it is contaminating the estuary or creek in the back yard it is considered to be a failing system. We have found it easy to blame these sorts of on-site sewage management systems in the past because we have not regulated or managed them well. When we do get these incidents, that appear to be happening more frequently, we can blame the on-site sewage management systems because we know that it is not being looked after terribly well.

We should not forget the incident in Wallis Lake: Blame was squarely pointed towards the on-site sewage management systems [OSMS], although it was never possible to prove conclusively that was the cause. That is because it is difficult. We have to do better with regard to OSMS so we do not necessarily say it is failing on-site sewage management systems that are typically the problem. We have to have a fee for service, better trained local council people, consistency between councils in the way they interpret a stronger code and no flexibility which allows a council to adhere to a guideline or do something different to the neighbouring local council. That comes down to private certifiers managing and maintaining on-site sewage management systems.

If you look at the United States as an example: 25 per cent of the population of the United States does not have sewers. That is 25 per cent of a population of 310 million people—it is a big industry. In many States that we would regard as developed, 50 per cent of those States do not have sewers. Pennsylvania, North Carolina and New York all have on-site waste water systems. Some States do it well and others do not do it well. They use private certifiers to maintain systems in the same as you would use a private person to take away your solid waste, for example. I do not see why we cannot go down that track with regard to on-site systems. We have to put something in place to make sure people are certified, regulated and trained. That is the only way we can proceed. People are going to have to pay. That is the real cost to the environment if we want to maintain our water quality and estuaries along the coast.

**Mrs TANYA DAVIES:** As you are talking I have more questions. I will come back to what you have just said in terms of the United States. The testing practice that is currently operating—we have talked a little about testing for viruses—at the moment can you see ways in which the testing methodologies presently used can be improved?

**Professor GEARY:** I can talk briefly about the work we are doing which looks at alternative nonbacterial indicators. We are looking at other sources of contaminants and sampling waters for other human contaminants.

**Mrs TANYA DAVIES:** Such as?

**Professor GEARY:** Laundry powder compounds such as fluorescent compounds that make your shirt so bright on the line and happen to be present in our washing products. If you have grey water or wastewater from a septic system it is more than likely to have that compound in it. Others have looked at pharmaceutical compounds which go through people and end up going through the septic system. There are a variety of other ways but we are not up to the stage where we can say they are better methods at this stage. We are looking at

those as alternatives. The standard way we have looked at the health of water systems is with respect to bacteria because of the ease of testing and the result being available in a short period of time. I do not have a suggestion for a better way at this stage but I am sure that something will pop up because anything that has been through a human system, whether the wastewater treatment plant or a wastewater septic tank and land application area, it is going to contain the things that we put in it that reflect bodily process, metabolism and so forth. There are things being looked at such as caffeine. When you get out into the middle of the estuary the dilutions are quite significant but the fact that you do not find them does not mean they are not there.

**Mrs TANYA DAVIES:** If we go back to what you are talking about in terms of the United States of America; some States test their systems well and have procedures and processes that are really good, and others do not. Could you go into a little detail as to which States do manage their on-site sewerage systems well? What is it they are currently doing that perhaps we should look at doing here?

**Professor GEARY:** Some of the States do it very well and partly that stems from the fact that they have a very strong code. North Carolina and Wisconsin both have strong codes. Those States certify the people who work in local government. They have to pass an exam. They are tested with respect to their knowledge of the regulations and how to interpret site conditions and do designs. As I said, some of the States, as well as having a strong code, have a strong training program. In the case of North Carolina they have 100 counties and from each of those counties they bring people in annually to a common training area and test them. It is a requirement that you have this qualification if you wish to work. The requirement is not just for working in local government. There is a specific qualification which enables you to do this. If you go and work in a local council you may have a degree in environment or some other relevant field but more than likely you have very little experience or background with the thing you are going to work on. There is clearly a need for training in local government that is of a required standard because of the movement in staff and the fact that people do come in and they do not have relevant experience. Council puts them into a role where they have little training, so it needs to pick that up.

Queensland has implemented a training system. In New South Wales we talked about that with our TAFE system but that has not eventuated into anything of substance. That is true for people who work in the industry. If we look at Wisconsin as an example; they have different qualifications for each of the stages. They have a qualification if you wish to be a designer; they have a qualification if you wish to be an installer; and someone who is an installer may wish to upgrade to be a designer if they want to get out of the hole and not get dirty. They would have to pass the examination that allows them to do that. They have a qualification for a person that does the site assessment, a certified soil tester [CST]. There are a couple of roles but each role has a different training requirement. If you are going to service systems and maintain systems that are mechanical and have the ability to produce variable quality effluent there needs to be a qualification for that as well. Our industry is not as big as the United States; nevertheless an industry which has the potential to impact on public health needs to be regulated.

**Mr THOMAS GEORGE:** I would hate the community to think that nothing is being done about this. Over the past few years, through government support, local councils have instigated a septic inspection system—I think it is only a \$30 charge. A lot of country people have expressed concern to me that they have had a septic system all their lives and although they pay this \$30 fee each year their systems are not being inspected. Professor, as you have said the resources need to be allocated to be able to carry out these inspections but a lot of people are questioning why they are paying the \$30 fee when they are not having inspections. It has started but it has not gone very far.

**Professor GEARY:** It is dependent upon the risk. If you happen to be in the middle of a farming block and you are not adjacent to a waterway that is used for oyster growing then your risk is likely to be much lower than if you happen to be sitting next to oyster beds. An amount of \$30 is not much; I would expect that substantially more than that would be required. But I guess different States tend to do different things. From my understanding, in Queensland if you do not get your system inspected or you do not do what you are supposed to do they will actually put you on to pump-out for a while, which means every 10 days you are paying a very large amount of money for someone to come in and take it away—we have that in some cases too. The incentive there is to not pay it and discharge it illegally—and I am sure that goes on as well. There are a number of models that we could look at to improve this but, ultimately, it is like your hot water system—if it fails, you have to get a new one and you have to pay someone. People do not question that. Some seem to think: I have had a waste water system all my life, where is it going? There is a cost associated with the maintenance and the upkeep and all those sorts of things, as you would expect.



**Mr THOMAS GEORGE:** The community is more conscience today about it and if there is a problem they have it fixed. Also if you build a new place out in the country today you have to abide by the rules and put in a proper environmentally-friendly system.

**Professor GEARY:** Yes.

**CHAIR:** Thank you for appearing before the Committee today. The Committee may wish to send you some additional questions in writing, the replies to which will form part of your evidence and be made public. Are you happy to provide a written reply to any further questions?

**Professor GEARY:** Yes, I am.

**(The witness withdrew)**

**BRETT GUTHREY**, Horticulture Farmer, NSW Farmers Association,

**JUSTIN SPENCE CROSBY**, Policy Director, NSW Farmers Association, and

**KEVIN McASH**, Chairman, Oyster Farmers Committee, NSW Farmers Association, sworn and examined:

**CHAIR:** Thank you for appearing before the Committee. I draw your attention to the fact that your evidence is given under parliamentary privilege. You are protected from legal or administrative action that might otherwise result in relation to the information you provide. I should also point out that any deliberate misleading of the Committee may constitute contempt of Parliament and an offence under the Parliamentary Evidence Act 1901. Before we commence with questions would you like to make a brief opening statement?

**Mr CROSBY:** Thank you. Firstly I congratulate the Committee on self-referring on such an important issue, which is critical to the integrity of food safety in this State. In particular, you will hear from my colleagues Mr Guthrey and Mr McAsh in regard to the oyster and horticulture industries. We would also like to thank the Committee for inviting the NSW Farmers Association to give evidence. As the Committee would be aware, the NSW Farmers Association is the largest State farming organisation in Australia. It represents the majority of commercial farm businesses in New South Wales. Whilst the association is generally associated with the grazing and cropping industries, importantly, it is the peak industry organisation for the oyster and horticulture industries in New South Wales.

I would like to make some brief general statements and then I propose, if the Committee allows it, to ask Mr Guthrey and Mr McAsh to provide some industry perspective. Our submission to this inquiry outlined the risks posed by both private sewerage management systems and public waste water treatment plants to individual farming businesses and how these risks have played out with cost to these businesses. In this opening statement I propose to focus on those costs and why it is critical that we manage domestic waste water. Firstly, although very briefly because I know Mr Guthrey will cover this in more detail, is the impact of effluent bypasses that have been experienced from the west Camden sewerage treatment plant upon horticulturists who have been drawing irrigation water downstream from the Hawkesbury-Nepean River.

I will now briefly talk about oyster production because it is very easy to see the cost to the State of not having proper disposal or treatment of domestic waste water. The oyster industry in New South Wales is almost a \$40 million production business at wholesale prices, and 40 per cent of this production exists on the mid North Coast and the North Coast, 29 per cent in the Port Stephens region and 22 per cent on the South Coast. In an earlier submission that we made to the New South Wales Diffuse Source Water Pollution Strategy we estimated that approximately 20 per cent of the oyster production in New South Wales is lost annually due to pollution closing harvest management zones. In terms of current production, this equates to almost \$8 million directly to the oyster industry. If we were to apply some multipliers that the South Australian Government has put in place for its oyster industry, that equates to a loss of almost \$38 million to the economic output of New South Wales. So it is an important issue with regards to the economic welfare of the State.

That figure fails to take into account some of those broader costs that the community wears. For example, in the 1997 Wallis Lake outbreak the Department of Health and Ageing outlined some costs of that outbreak, which amounted to an \$8.5 million loss in oyster sales alone at wholesale prices and 60 jobs within that estuary. There was \$12.1 million in adverse health outcomes, which constituted one death, 70 hospitalisations and 500 affected persons. There was also a \$1.1 million loss in holiday accommodation sales. The Committee will see that a broad cost is borne by industry. There is a broad cost in the way those benefits flow throughout the community and then there is this other cost that goes to communities, particularly those in coastal tourist areas where our oyster industries tend to be based.

Next I will talk about how industry is being involved in trying to improve the integrity of food safety from the risks that are caused by waste water. Firstly, in the horticulture industry Food Standards Australia New Zealand currently have a working group which is providing guidance on the development of a primary production processing standard for horticulture. We represent the New South Wales horticulture industry on this group. One of the key things we have been championing in, and I believe we have had some real success in our discussions, is that there is recognition of the high quality assurance systems that exist within the horticultural industry and that there needs to be a way that supplements not duplicates these quality assurance systems. We have also commenced some discussions with Peter Day on behalf of the Food Authority as to how this will be rolled out into New South Wales and how we can ensure that these quality assurance systems will be in play and

how we can provide best outcomes for the integrity of the food we produce, and that we hope that the mums and dads right around New South Wales and Australia will feed their children.

On behalf of the New South Wales oyster industry, the NSW Farmers Association has partnered with OceanWatch to establish an environmental management system using Caring for our Country funds. This provides an incentive not just for oyster farmers but also for land-based producers and catchment groups to adopt systems that reduce water pollution, particularly there are funds out of incentive grants that have gone to looking at septic tank overflow management. I will now briefly turn to some of our recommendations and then I will pass on to my colleagues. In our submission we have a number of recommendations that look at how we deal with regulation and how we can work with councils and other community groups to try and bring about better performance in the treatment of domestic waste water. One of the key things we have identified is the need to work with local councils to help them identify and implement best practice for on-site management of sewerage. These recommendations have drawn heavily on the experience that members have seen particularly with the Hornsby, Great Lakes and Port Stephens councils, and the great response they have had in working with them.

We were also unsuccessful in partnering with the Department of Primary Industries to seek funding through the Environmental Trust to try and form a project that would fund a working group or a project officer who would go around and help to establish some benchmarks and then to disseminate and collaborate with councils as we implemented those benchmark systems across New South Wales estuaries. The key reason I raise this is—as I have noted—whilst regulation is important, NSW Farmers also knows that to improve performance in this area regulation itself is not enough; there needs to be some incentives that go with that. As such we would welcome recommendations from the Committee that do focus on how do we help councils to work together in this area, to set some benchmarks and to put some quality systems in place across the board? We believe some of those principles would also work across sewerage treatment plants. Also how do we tweak regulation to ensure that we do get a good quality outcome? I will now hand over to my colleagues for their comments.

**CHAIR:** Thank you for that thought but we will not be doing that. The Committee has read your submission. The Committee will now ask you some questions and if there is time at the end then your colleagues might be able to make some comments. In your submission your first recommendation is the development of a sustainable waste management campaign to educate local government and citizens about sustainable sewerage management. First, in your view what are the biggest short-comings by local government in relation to sewerage management? Second, what do you think citizens need to be made aware of in relation to sewerage management?

**Mr McASH:** The shortcomings?

**CHAIR:** The shortcomings by local government in relation to the sewage management and what do you think we need to be made aware of in relation to the sewage management; it goes back to your first recommendation in the submission we received?

**Mr GUTHREY:** From a horticultural point of view obviously most of the shortcomings come from the on-site wastewater systems again not being properly checked running into our water. I am not quite sure how our sewage treatment plants [STP] go with local government but it is definitely our view that those standards should be applied to sewage treatment plants as well. A sensible approach would be the licensing of people who are actually servicing these systems. It appears across-the-board that whilst I would not call them rogue but both council and people inspecting them are not up to standard. I understand the manufacturers of these systems have quality assurances in place, yet for some reason this does not follow down the line.

Microbial testing makes a lot of sense. One of these submissions I read, from one of the manufacturers actually, talks about engaging the owner so talking to them and making them understand what is going on with their system, especially in high risk areas. We would not like to see in that system anything that empowers councils more to register farms or empowers councils to give them the ability to destroy crops.

**CHAIR:** You mention oyster growers enter into lease agreements with the New South Wales Government to grow and harvest their oysters but then they have no control over the land use in the area. Can you explain to the Committee what would normally happen if there has been contamination of the waterway used for oyster growing in relation to mandatory suspension of oyster production and what then happens to the lease arrangements in circumstances where use of the waterway for oyster harvesting is prohibited?

**Mr McASH:** Kalang might be the best example, and this also goes to shortcomings of local council. In that case—I think it was in our submission—Kalang was a norovirus outbreak in the river. The river has been closed for three years, I think. I have just been up there and a young farmer, the sort of people we do not want to leave the industry, has just packed up and gone. The shortcomings of local government there were that they denied that they had not done auditing; they claimed they had done auditing on the septic tanks in Crown land, individual sites and caravan parks and that had not taken place.

I know that Fisheries and Lands, because there is some Lands Department land, a lot of money was spent trying to find out what was the problem and council just did not want to have anything to do with it—Bellinghen Council, I think it was. They have now been given some funding and they are now moving on that but it is far too late. The river closed until, particularly in the case of norovirus but with any other pollution event, a meat test is done on the oysters which indicates that they have filtered out the indicator, in this case the E. coli; there is no harvest of oysters in that river. If that continues, which it has done, then oyster farmers are out of business. What happens to the leases? They do not have any value. In the case of Michael Wright, he just walks away.

**Mr JAMIE PARKER:** Thank you for taking the time to come along today; we appreciate hearing your advice. We have heard two things from you and from the previous speaker, which is compliance and the need to introduce some kind of private certification process, probably a bit like the development approval private certifier process, which is useful information. The question is: How is that enforced? You have spoken about correct benchmarks in local government but what if those benchmarks are not enforceable? You have identified the problem that if it is just the goodwill of council that relies on it, we will not see those benchmarks adhered to. Does your organisation support an enforceable code around this issue to ensure that those benchmarks are met and if they are not met that there are repercussions for not meeting those benchmarks?

**Mr CROSBY:** Probably the important thing for the Committee is that we actually know how to form the policy that calls for a compulsory enforceable code with regards to the auditing of on-site sewage treatment plants. As you would note from when I discussed the application to the Environmental Trust, we believe goodwill exists within councils to achieve this and with regards to the carrot and stick approach I was talking about before, there is a need to try to work with councils to try to upskill the labour power they have within their organisations to help them know what they should looking for and the systems they can put in place and help them report back on those systems so that we have a better understanding across the State as to the health of our sewer management systems and therefore the health of our estuaries. That is the first process that we go through. Depending upon the adoption of that, we would be willing to look at other options but we do believe there is a need to work with councils first at this point in time.

**Mr McASH:** Using the Kalang example, which is kind of the worst one at the moment, the oyster industry is working with OceanWatch and NSW Fisheries to improve our industry and make it environmentally sustainable and economically sustainable. We have engaged with OceanWatch, as you will see from our submission, and OceanWatch has developed environmental management strategies up and down the coast to improve the rivers, not only for oyster farmers but for the public, the community. One of the aims of these environmental management systems [EMS] and the oyster industry is to engage with the community so that they will share a quality waterway.

Yes, septic systems discharging into the river adversely affects the oyster industry but it is not simply that; it is about the community. The reason that we are alert to these things is because we do meat testing and water testing in the river and if the oyster is clear and it has no E. coli in it, it is edible. If it has not, it is closed. We want to work with councils but one of the problems is that, whether it is a private certifier or it is council doing its own inspections—in the case of Kalang, when they were asked for those records, they were unavailable.

If we go to a benchmarking system, then it would seem reasonable for councils to submit a report on the condition of the septic tanks to a food authority or some other food agency, just to report, saying, "This is what we have done; this is the commitment we have made to our septic inspection system and these are the results we have got." The problem in Kalang was the council said it had done the inspections and it clearly had not but there is no further move on that; it is just a whole bunch of moneys to be spent.

**Mr THOMAS GEORGE:** The previous witness and you seem to be giving us the message that councils have a big part to play in assisting in the growth of oysters; you have gone a step further and

highlighted three councils—Hornsby, Port Stephens and Great Lakes. What are those councils doing that the other councils are not?

**Mr McASH:** The first thing they are doing, particularly Peter Code at Hornsby, is engaging with the industry. There are problems with Warragamba Dam now overflowing of course, but before that, he speaks to the industry, comes down and has a lot of involvement with oyster growers in that river. The engagement is to tell them what is happening, to find out what needs to be done and to work with oyster farmers because we have got the equipment on the water to do work, to do testing, to transport people and give advice on these things from the water.

I have a sense that Port Stephens and Great Lakes adopt the same attitude. They get out of the office, they go and talk to farmers and they work with them. I think this is what Justin is talking about. We are looking to work cooperatively with councils. This is not a finger-pointing exercise. We want to find out what needs to be done and work with them to solve that problem. Importantly, if you are going to have a septic inspection system, which some councils have different variations on how successful they have been—I think it came up earlier—we are not suggesting that there is a huge impost on individuals who are not in watercourses, drainage systems or on the river but certainly people who are on the river should be educated and made aware of their public responsibilities if they pollute the waterway.

**The Mr THOMAS GEORGE :** There does not seem a very big difference between the councils that are doing right and that ones that are not if it is just engaging?

**Mr McASH:** In terms of reporting? I have anecdotal reports up and down the coast from oyster farmers where councils have either employed a consultant or do it themselves, charge far more than \$30 to inspect it, spend 15 minutes there, have a look around, "Yep, it's okay" and they are gone. One oyster farmer—

**Mr THOMAS GEORGE :** You are talking about the septic tank inspection?

**Mr McASH:** Yes. You have low risk, medium risk and high risk, and he was in a high risk area on the river. The guy spent 15 minutes there; he looked at nothing and disappeared. He said, "This looks all right, yep, great", and he was gone. He signed off. He was a private certifier. Council gets the document and says that inspection has been done—it has been ticked, it has been signed, it has gone. When they get asked whether that inspection has been done, of course it has been done—it has been ticked off by the private certifier. So I think there is a bit more work to be done in that part of it.

**Mr CROSBY:** To your point there a little bit, and I think it also answers part of the Chair's earlier question about what sort of education goes with this, even within our own organisation we find that the impacts of your business upon your fellow farmers is not always well known and if you were to explain to the operator of the local caravan park that runs an on-site sewer management system that his system is not up to scratch and that he actually could be jeopardising his own future because of the impacts upon the oyster industry and then the flow-on of that impact to the tourism industry through hepatitis scares or even just having a closed estuary and the effect that has upon people's perception of a clean, safe environment for someone's family to go swimming, they take a greater interest because they know that their future is vested in having a properly managed sewerage system.

**Ms CARMEL TEBBUTT:** The question I want to ask is about the cost of improved regulation and monitoring because you and the previous speaker spoke about ultimately the need for improved regulation and monitoring, however that might be achieved, whether it is through State legislation implemented by councils, but, nonetheless, however you do it there is a cost and someone has to pay. I appreciate what you are saying about how greater awareness and knowledge of the impact of your activities can lead to some improvement, but it is also about the quality of the system you install, how well you maintain it, the cost to monitor it. Do you have a view about how that cost should be managed?

The previous speaker, if I understood incorrectly, certainly seemed to be saying that there should be a fee-for-service arrangement that needed to be sufficient to cover the cost of improving regulation. Would you support that? Ultimately I guess some of your members would be the ones who would be paying and they might be people who are not necessarily in the oyster industry, for example, and do not see that they have got a terribly lot to gain from a better regulated system.

**Mr McASH:** My view is that yes the user should pay but there is also a public interest in having that. Let us look at how this person got to where they were. The subdivision was permitted. Whether sufficient care was taken in deciding the size of allotments because the site was not sewerred I think that is something that has got to be looked at. A lot of councils outside of Sydney want to encourage it; they want to encourage people to come there. If you are going to do a subdivision of land which is not good soil, not good waste disposal and there is a potential for pollution in there, you have got to think of either larger blocks, alternative disposal systems, and there are others besides aerobic systems and simple septic tanks. These people have bought the land, it has been subdivided; they have been allowed to move in because the citizens there, the ratepayers, want them in the area. Yes they should pay, but I think there has got to be some overall view of public benefit for them there.

**Mr GUTHREY:** If I could comment as well with regards to horticulture and back to STPs, because, as I said, they are the ones that influence the most, and the river health in itself. Just recently we had at Camden minor floods—only minor flooding—but I was told that at that time there was untreated sewage that our treatment plant could not cope with. While it could not cope they apparently have private agreements with local landholders and this untreated sewage was pumped into their dams on their land. I understand also that those dams were full. So I guess after that they have no alternative but to pump it into the river. Concern would be that once they are in these dams they are going to pump them out onto their fields. You get a rainfall after the event and perhaps it is all going to wash back into the river, and once again we get into this roundabout thing of untreated sewage.

I think basically the view would be—getting back to your question, Jamie, before that that definitely needs more legislation. So third-party agreements outside of what the STPs are doing and how they are disposing of their effluent not only in the river definitely needs to be looked at. But also I believe that it is in the community's interest that basically any sort of untreated discharge is unacceptable and we would really like to see that practice stop. For some reason it is condoned, it is allowed to happen at any time. Their testing regime is, I believe, every six days and it is basic in itself. If you ask people about how they would like the Nepean River, without a doubt it would be that it is healthy, and if there was a cost to come with that I see no reason why it should not be paid for; it is in everyone's interest and it should not be treated as an open sewer.

**Mr THOMAS GEORGE:** This happened during the recent floods?

**Mr GUTHREY:** Yes.

**Mr THOMAS GEORGE:** Surely as a farmer representative you know that no-one can control what happens in floods. Could you clarify that, because whatever happens in floods there are problems with systems all around the State that have had problems in the last few weeks? You said there was a recent flood at Camden.

**Mr GUTHREY:** That is right. We had a minor flood event—our river came up 2.4 metres, which is not big. On top of that we have so much subdivision going on. I guess the basic point at this time is that what the current STP is able to cope with is minimal. I also understand that if there is a power outage, for instance, at the STP that during these incidents untreated sewage is put out into the river. Say, for instance, they have no requirement to have a generator on site so this does not happen—simple things that in quality assurance, in terms of growing what I do, produce, to ensure that these things do not happen. I think it gets back to the point that untreated discharge—I am not sure of your view but the people I speak to, any sort of untreated discharge, which is what we are talking about on-site as well, is generally regarded as unacceptable. The reasons behind why that may not be coping gets back to perhaps some of the codes of practice and plumbers putting stormwater drainage into sewerage pipes because it is simply a lot easier.

**Mrs TANYA DAVIES:** In relation to on-site sewage treatment systems, what are the risks, if any, posed by poorly constructed or maintained OSMs leeching sewage into the soil and groundwater? For example, are there any notable examples of horticultural contamination? There was one in terms of cucumbers that were contaminated with E. coli in 2011. Can you elaborate any further?

**Mr GUTHREY:** To my knowledge the E. coli in the examples in Europe and recent examples in lettuces and sprouts in America have got to do with their washing processes. So it is not going through a process of sanitising water. For instance, when we are washing our fruit to go through before packing we are required to chemically test the water; it has to be topped up at so many hours; we have to send away the water samples, and it is my understanding that it is that system that failed. You have got to understand that we can do all we want to reduce, and we should do all that we want to reduce E. coli in the whole system, but human excrement is not the

only avenue of infection for E. coli—obviously there are animals and all sorts of things, especially when you are growing a leafy crop such as a lettuce.

Recently in America there was Listeria with regards cantaloupes—but you are growing something that is on the ground; it is the process that after you harvest you then put in and it is that quality assurance that you need to have in place that ensures that anything that is on that piece of fruit is acceptable to the community and will not harm them. There were no cases that I am aware of whatsoever in New South Wales of farmers actually having a problem on-site.

**Mrs TANYA DAVIES:** You mention in your submission that there is no effective whole-of-government coordination to manage sewer spills. I have got three questions to ask and there are four minutes to go. How are sewer spills currently managed?

**Mr GUTHREY:** As in STPs or on-site?

**Mrs TANYA DAVIES:** On-site STPs. The Committee is focusing on on-site sewage management; if you could focus on that that would be helpful.

**Mr McASH:** There is a notification process. From an oyster point of view there is a protocol of notification. We get notified that there is a septic that is a problem, and it also usually comes up in our regular testing regime. In many cases the oyster farmers find the problem and notify the council. If there is a substantial overflow from a septic tank then in many cases—and this is another part of this picture—if we have a proper notification protocol, which exists where I am but may not exist further up and down the coast—then you notify the oyster farmers that there is a problem, also that there is a problem with pump station overflows, and they can act. If it is a run-out tide then they can move stock, pull them out of the water and do something about it and become involved in remediation works and things like that. So there is a protocol in place.

**Mrs TANYA DAVIES:** Do you think that the protocol that is currently operating is sufficient?

**Mr McASH:** We have just been discussing that at Clyde River where an old yacht sank. The protocol did not work there but it is in place. The problems were that the personnel who were in the positions were not aware of the protocol, for reasons I cannot explain. But what we are aiming to do is for the first call to be oyster farmers, vegetable growers, if there is a treatment plant overflow so they can stop pumping, irrigating, so that we can remove oysters and then notify the food authority, fisheries—in our case the Hazmat team from Batemans Bay Fire Brigade. We also had a lot of success with the local council in its treatment plant pump stations—a great notification system there, but I am not sure that that is a protocol that is adopted or observed by every council.

**CHAIR:** Thank you very much for appearing before the Committee today. I think there will be a number of questions we would still like answered. Would you mind those additional questions in writing and the replies to which will form part of your evidence and will be made public? Are you happy to provide a written reply to any further questions?

**Mr McASH:** Yes.

**CHAIR:** Thank you for appearing today, it was very, very helpful.

**(The witnesses withdrew)**

**(Short adjournment)**

**JOSEPH HENRY WHITEHEAD**, Director, Whitehead and Associates Environmental Consultants Pty Ltd, sworn and examined:

**CHAIR:** Thank you for appearing before the Committee. Do you have any questions concerning the procedural information sent to you in relation to witnesses and the hearing process?

**Mr WHITEHEAD:** No.

**CHAIR:** In what capacity are you appearing before the Committee?

**Mr WHITEHEAD:** I am the principal of consulting company Whitehead and Associates Environmental Consultants and a director of the Centre for Environmental Training, which is a part of that consultancy and which trains professionals in the on-site wastewater area.

**CHAIR:** Your evidence is given under parliamentary privilege and you are protected from legal or administrative action that might otherwise result in relation to the information you provide. I point out that any deliberate misleading of the Committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Before we ask questions would you like to make a brief opening statement?

**Mr WHITEHEAD:** I have been involved with on-site wastewater in New South Wales since the early 1990s—of the order of 20 or more years now—in a consulting capacity, in a professional training capacity running short courses, and also lecturing at Newcastle University.

**CHAIR:** Your submission refers to regulation of domestic wastewater with regard to aquaculture. Could you give us your view on the regulation of domestic wastewater in agriculture, for example, recycling wastewater to water food crops?

**Mr WHITEHEAD:** I am an environmental engineering geologist so my expertise lies much more in the impacts and the monitoring of these sorts of things. I do not have any special expertise in agriculture or aquaculture for that matter apart from tracing problems associated with wastewater. From the agricultural point of view, where municipal wastewater is appropriately treated and applied in broad-scale agricultural use for pasture grass and that sort of thing it commonly is well regulated and well managed and the adverse impacts are few. In the case of aquaculture, where of course the industry is mostly located on the coast, the impacts of on-site wastewater systems are more significant in the sense that much more wastewater that is treated by domestic systems is applied in close proximity to oyster leases. There have been well-documented impacts over recent years in a number of estuaries and lakes along the coast of New South Wales and whilst some of these can be attributed clearly to poorly performing or failing on-site wastewater systems where doubtless installation, management and regulation could be improved, there have also been impacts where on-site wastewater systems were not clearly identifiable as the sole cause.

**CHAIR:** In your submission on page 1 you state that the New South Wales regulations have in several cases not proved adequate in ensuring food safety. Do you believe that these cases are due to inadequate regulation or the failure of the owners of the wastewater management systems to abide by the current regulations?

**Mr WHITEHEAD:** I think both. The regulations in New South Wales are now rather dated; they do not reflect current best practice in the industry widely even in New South Wales but certainly in other States and overseas. We could learn a lot by picking up on those good practices elsewhere, so the regulations might be better. Also, the application of the regulations is very variable from one local government area to the next. As a consequence, in some cases things are done very well but in other cases they are not done so well, so there is room for improvement there. Clearly, there are situations where systems that have been put in the ground do not comply with the regulations. Many of these are older systems that were put in before the regulations raised the standards and they have not necessarily been picked up since. There are situations where more modern systems have been put in subsequent to the release of the current regulations that clearly have not complied. In some cases it is a matter of people slipping through the net because the resources available in local councils in particular are sometimes stretched, and budgets are stretched, so they cannot be as vigilant as they need to be to apply the regulations rigorously. So, there are a number of reasons why these things happen.



**CHAIR:** You mentioned best practices elsewhere; are you talking about States or Territories or other countries? Where do you envisage would be good places to start finding better practice?

**Mr WHITEHEAD:** Part of that is due to the fact that the industry progresses with time and as new findings, new science and new engineering solutions become available we can adopt them. We need to look widely for those but the United States probably is our biggest single lead in terms of documentation and good practice because they invest a lot of resources there. The United States Environment Protection Authority would be one. There are good practices in some regions in New Zealand, in particular in relation to the impacts on coastal water bodies, because their Maori legislation has very strict requirements on wastewater discharge and wastewater has to be discharged on land rather than into the water. It is still discharged in close proximity to the mostly mussel leases there rather than oyster leases. We can learn some things from them. Other States have in recent years reviewed and updated their guidelines or codes of practice—South Australia, Victoria and the Northern Territory, in particular, have done work which would be well worth reviewing from the point of view of things we could pick up.

**Mrs TANYA DAVIES:** In your submission you suggest updating New South Wales environmental and health protection guidelines. Can you explain what the guidelines are? Earlier speakers have referred to the Australian-New Zealand Standard but this is the first time this has been brought up.

**Mr WHITEHEAD:** There are two separate documents: the Australian-New Zealand Standard, which has just very recently been revised and released, at the end of February, and the New South Wales guidelines, which are more commonly known in the industry as the "silver book" or the "silver bullet", which was published by the Department of Local Government on behalf of other government agencies in 1998. That document was reviewed in the early 1990s. I was one of a number of people on a committee of experts engaged to do a technical review.

**Mrs TANYA DAVIES:** Can I interrupt? You mentioned that it is often referred to as the silver book. One of our previous witnesses, Associate Professor Phillip Geary, identified that document as the silver book when he spoke to us.

**Mr WHITEHEAD:** This is probably going over similar ground. It is the same document. I have given it its formal title whereas the silver book is more colloquial. It is now an old document—1998—but there was a review, which was started but has not been published. The technical part of the review was completed in the mid 2000s—2003-2006, that sort of period.

**Mrs TANYA DAVIES:** In Associate Professor Geary's evidence he was fairly critical of the silver book and its failings and inadequacies, and that it is old and needs to be updated. What is your opinion?

**Mr WHITEHEAD:** I probably share similar concerns. The document is largely a management document, so it provides a framework but it does not provide much by way of technical support for people who actually do the job. From a scientific and engineering point of view it could be much stronger. Personally, I would like to see it have that stronger scientific and engineering support so that the people who use it are better supported in applying it. Also, there is not an awful lot of it that is based on sound science that is validated. Whilst it provides general guiding principles, I think we could do a much better job in New South Wales if we had something that was backed up by substantiated, peer-reviewed science.

**CHAIR:** I am sorry to keep going back to him, but Professor Geary indicated that it is just a set of guidelines and that we actually need an enforceable code, which seems to be a common theme. Do you see an enforceable code as the way forward?

**Mr WHITEHEAD:** Yes, I think that is a different approach. Rather than a code, the guidelines were said to be guiding principles, at the time when a more flexible performance-based approach was thought to be a good way forward. But in hindsight, the application of that has meant that it has been applied in a very variable way. Some regulators wave the book of rules and say "Do all of those things" and others say, "Well, take it more liberally and use it as a set of guiding principles". I think if there was something more technically robust and more detailed, people would be able to say, "These are the things we really need you to do and this is how you do it. We all have the document we need to be working with to be able to do that, so let us get on and do it." I think an enforceable code, in that respect, would be helpful. But I would not want to see that it becomes prescriptive so that a big book, with lots of information, is taken by regulators who then say, "You have got to do all of those". You have to be able to select the right things and apply them at the right time, in the right set of

circumstances, to get the best outcome. So my view is that we would have to be careful that we do not over prescribe.

**Mrs TANYA DAVIES:** You and others in the industry have great knowledge and understanding as to where the gaps are and what needs to happen. Would you provide a list of names of some of those experts who could be approached if we were to convene an expert panel to pull together a revised silver book or a revised Code of Practice?

**Mr WHITEHEAD:** Would you like me to identify some now or would you like me to provide you with a list later?

**Mrs TANYA DAVIES:** If you are more comfortable with that, providing a list later.

**Mr WHITEHEAD:** It would put me on the spot, to be comprehensive and exhaustive. There are a number of people in academic institutions, for example Leigh Davidson of Southern Cross University, who has done good scientific work in the area. There are other people working in practice, people like Daniel Martens of Martens & Associates, who have a good reputation and long-standing experience in the industry. There would be other practitioners too. If I were in a position to choose, I think that it would be helpful to also have some experts from outside New South Wales. I think there are areas of good expertise that we could call upon that lie elsewhere. So I could come up with some names—for example, Robert Van de Graaff, who is an elderly but very respected soil scientist. He has contributed a lot to the Australian Standard and could usefully be on a panel of reviewers or something of that sort. Perhaps some overseas experts could be called upon because so much of the good practice comes from overseas. They do not have to be brought here, they can be called upon to review things from a distance and that can be effective.

**Mr JAMIE PARKER:** Thank you for taking the time to give evidence today. From looking at the evidence, what we know is that a lot of the on-site sewerage management systems are a problem. We know that in the Wallis Lake situation, up to 33 per cent of those systems had failed and that may have contributed significantly to the issues there. We also know that the guidelines are old and probably need updating and reviewing. What I am interested in is your expertise in the training area. We could have the best guidelines in the world but if there is not the training and rigour required to do proper inspections, that is a significant problem. In your submission you say that there are no standards for inspection or for reporting. For example, you say that there is no universal standard across New South Wales that says what one must look at and report on when one visits a site. That seems to be a strange situation because I know from my experience in local government—and several members here are also experienced in that area—private certification and accrediting has a very clear range of steps that one has to comply with in order to tick off that a development application or a food safety inspection has been complied with. What is your view in terms of how this training issue can be resolved and whether or not you feel that there is more specificity required in terms of design and installation compliance?

**Mr WHITEHEAD:** I think the application of those guidelines that we have is variable. In some cases it is done well and local government has taken the lead and set up its own standards that apply locally which, in some cases, are quite rigorous. But in many cases—for budgetary reasons and also probably because of limited staff resources and in some cases limited skill sets amongst the staff—staff is not well trained in the field and there are gaps which result in the application and implementation being of a lower standard. There is some training available through the Centre for Environmental Training, which is part of my organisation. Since 1996 we have trained over 4,000 people throughout Australia, New Zealand and the Pacific islands. I do not have the numbers for New South Wales but I would hazard a guess that that may represent in the order of 1,500 to 2,000 people in New South Wales—a large number. There is a high turnover of staff in this area and one of the problems that local government has is that training budgets are thin and a lot of people are working for a long time before they get trained or do not get trained at all.

The industry has something of a Cinderella status. People have become used to doing things on the cheap and as a result, the outcomes we get are rather bargain basement. It is a shame because there is so much that we could do better. That then means that budgets in the private sector for consultants who are working in the area for installers, maintenance people and that sort of thing, are similarly thin. One issue around training is that they are reluctant to train, resistant to training, or unable to afford it. The other is that we do not have prescribed standards for inspections, auditing of systems and that sort of thing. As a consequence, it is difficult to train to a set standard because there is no set standard. We can train people to what we perceive to be good practice and we try our best to fit in with the guidelines and the codes as they are being implemented but I think

there is great opportunity to do better there. That goes hand-in-hand with updating and revising the guidelines or the codes so that we have the documents to work with. We can then say to people, "These are the documents you need to work with. You need to get yourself well trained so that you can either regulate in this area competently and confidently or you can practice in this area in the private sector". They may work either as auditors, inspectors, assessors, site and soil assessors or private certifiers. At the moment private certifiers do not get involved very much with this but it is an area that could conceivably be worked in by those people, if they were appropriately trained.

**CHAIR:** I pick up on the point you mentioned about councils and training. Given the technical expertise required to understand the numerous domestic waste water management systems installed across the State, do you think councils are best placed to manage the inspection of these systems? I have asked a question and I will let you answer it but secondly, have you already said: But we really need to focus on extending the training for councils in that area. Thirdly, if councils are not the best place, who is best to carry out those inspections?

**Mr WHITEHEAD:** The work in relation to on-site waste water systems carried out by councils is commonly done by environmental health people or building inspectors. They most often come from a background that is not specifically an on-site waste water background, so they generally come with some but not all the skills that they require. If they were to acquire all of the skills, there is scope for them to be trained to acquire those other skills. If they have not got any of the skills, obviously they will need training. I do not think they are necessarily badly placed to do it but I think they need better support to do it well. Having said that, I do not think that they are the only people who could do it and so there would be scope too for other professionals interested in this area to provide that sort of service. I do not see that it has to be exclusively provided by councils. But all people, if they are going to practice at a high standard, need to be well-trained, competent, confident and up-to-date. At the moment a lot of people are not in a position to be as up-to-date as they need to be to do a good job.

**Mr THOMAS GEORGE :** It has become evident, from what witnesses have said this morning, that the variation of councils' responsibilities or their attitude to the management of domestic waste water seems to vary quite a bit, whether it is through lack of resources, lack of training or lack of engagement. Is there any process that you have in mind that could improve the reporting system or encourage a better one?

**Mr WHITEHEAD:** My personal view is that the State Government is in a strong position to take a lead with this by providing good robust guidelines. If councils are going to be the agency that implements this, the Government should support them to do it well. The Government should also have high expectations that they will do it well. In my experience in the last 20 years, the on-site waste water area has only been funded significantly in response to problems. There needs to be a proactive approach that says: Let us get this right and do it well so that we can avoid problems or reduce the risk of problems. I see a good strong input from the State governments in terms of their code or guidelines and the involvement of the regulatory agencies with an interest in this area. Those agencies are very thinly staffed and have had very intermittent direct involvement over the last period of 15 years or so.

When there is not a major issue to address it goes off the boil a little bit, is put on the backburner and people forget about it. I think we need somebody more on their toes, interacting more closely with local government and saying, "These are things we could be doing and should be doing and we are supporting and funding you to do them". It would not require huge amounts of funds but adequate amounts to be able to do it. I would like to see local government in a position where it could be expected to do that well but also be expected to be accountable and to demonstrate that they do do that well. Because, in some cases, for example after the Wallis Lake funding when the Septic Safe program was put in place, funding was given to councils and clearly the outcomes of that have been varied. Some local governments have spent the money wisely and have very good programs in place; others seem to have progressed little from before that time. They have either not spent the money wisely or have not invested any of their own resources or taken an interest in it in order to help the program along.

**Mr THOMAS GEORGE:** Further to that answer, if the robust guidelines were developed by the Government, surely you would not want three or four departments trying to enforce those. Would it not be better to just have the local council, with those robust guidelines, working with the industry at a grassroots level?

**Mr WHITEHEAD:** I can see that the fewer people you have involved, the less complex it is. At the same time, this is an area of significance and of interest to a number of Government departments. The NSW

Ministry of Health and the Department of Local Government has had carriage of it and the Department of Primary Industries, with fisheries and that sort of thing. So I can see that they would all want to be players in this and it is important that they are because they all have different skill sets and different things to contribute and I think they need to be more actively brought together. I am not a party to it but there is a committee of those organisations but I do not know how frequently it meets. My hunch is that the Sydney Catchment Authority got a little frustrated with the lack of progress with those Government authorities and it has developed some more rigorous guidelines of its own for application within the Sydney Catchment Authority. It is demonstrating a taking-the-lead approach. I think we can learn from that and that it would be a good way to go more widely in the State.

**Mrs TANYA DAVIES:** You mentioned that professional training models were adopted in many states of the United States which provide an indication of an appropriate industry standard. Do you have a view as to which states in the United States or which training model would perhaps provide best practice?

**Mr WHITEHEAD:** Because there are some 50 of those, many of which are good, it would be hard to pick one. There are good things in lots of them and it would be easy to draw the good points together in order to benefit from that. We could bring best practice together by picking the eyes out of the best of them. I have had direct experience of some, one of which is in Wisconsin because I had a sabbatical there as a visiting professor at the University of Wisconsin a couple of years ago. I am not saying that that is the best but it is a good one and there are others that are similarly good too. Again I could probably provide more information on that later more readily.

**Mrs TANYA DAVIES:** Leading on from Thomas's discussion about who would best administer any new code or new guideline that may emerge from this Committee's review, it is one thing to have in place a set of rules and an expectation that people will follow them—that is their job and they are paid to do a job—but if a body is not watching or checking or getting reports some people may blur the edges or not do the full job that is required. Do you have any opinion or ideas as to the auditing or the reporting mechanism? For example, local councils need to submit an annual report. That has to happen. In that they cover all their services in a financial report. Do you have an idea as to what reporting or auditing mechanism could be used in this industry to basically maintain the standard?

**Mr WHITEHEAD:** I am not terribly familiar with the way in which the government would work to implement that. The only direct involvement I have had with that is we were engaged by the Department of Local Government sometime after the funding relating to the Septic Safe program to essentially audit the actions of all of the councils throughout New South Wales and see what they had done with the money they had been given and how far they had progressed and that sort of thing. Whilst the response in some cases was quite good, there were lots of councils that had not taken much action at all. We reported back to the Department of Local Government and I did not hear anything more about that. I do not know to what extent that was followed up, for example. But if it was my money and I was expecting to be accountable I would like to see something more rigorous in terms of following up to ensure that the money was being spent or well spent because in some cases it clearly was not. I think that whoever takes that on there is an onus on them to do a rigorous job. Quite how that would work in terms of say governments, I am not familiar with how that could be implemented.

**CHAIR:** Just a comment before a couple of questions: You make a good point that we need to be proactive as compared to responsive. Today we have heard instances of health issues and then we have responded. I think you are very much on the money there. Also the point you make about funding is a cognisant point because, as Jamie said, he is from local government and we have got to be careful that the impost of cost shifting does not stop what we are trying to achieve, so it is not just another thing that local government has to do. I think you make a good point that the money has got to come from somewhere.

I will ask you two questions because out of our 30-odd submissions there were two parts that only you answered and that was with your expertise of land geography. You mentioned site and soil characteristics, catchment-related risk to sensitive receptors and the need for that to be taken into consideration when approving on-site sewage management systems [OSMS]. Could you briefly describe how differences in soil types and land geography can be differently affected by faulty OSMSs?

**Mr WHITEHEAD:** That is the outcomes or, rather, the other way round that the capacity of land to manage wastewater varies according to characteristics like soil and other physical characteristics of the terrain, the slope, the climate and that sort of thing. We have nowadays a pretty good grasp of those parameters and how they play out in terms of the impacts. What we need to do is incorporate into good guidelines and good planning

that information that we have now and the understanding of it to be able to better manage systems. I think that we have the opportunity if we do update and modernise codes of practice, guidelines and that sort of thing to do that.

We use a geographic information system [GIS] which is a mapping management tool nowadays much more widely to enable us to capture this information more comprehensively. It is not necessarily done on a very detailed scale but it can be very helpful in terms of guidance. Some of the councils are adopting this sort of approach now and developing guidelines which identify for them the minimum standards or the minimum expectations in terms of levels of reporting to ensure that reporting is rigorous enough to then give us a reasonable chance to get good designs which will work and provide the protection of the environment and the protection of public health that we need. That is instead of just taking a one-size-fits-all approach which sometimes may work fine and other times does not work. I just think we got a bit more enlightened about our approach with that really.

**CHAIR:** I found it interesting when you referred to the need for applying sound science in the development of best practice OSMS management. Could you explain to the Committee about the nature of the science required? For example, hydrology and hydrogeology, what do they refer to and how can they be applied to OSMS construction and maintenance?

**Mr WHITEHEAD:** There are a number of scientific disciplines, for example, soil science, climatology, understanding of vegetation, understanding of groundwater which would be hydrogeology, and hydrology is the flow of water on the surface and that sort of thing. In each of those areas many people do worthwhile research which has a direct bearing or in some cases a less direct bearing on onsite wastewater work that we can usefully learn from. That sort of material would be published in journals and conference papers but very often in the development of guidelines little of that is brought into the guidelines. And that information is validated, it is accepted by the scientific community as being robust and we can hang our hats on that more comfortably than figures that we might develop on assumptions or on a whim or pulling a figure out of the sky. I am not saying that all guidelines are developed like that but there is a tendency for people to write guidelines in this more general way and not support them and not bring in this detailed and rigorous scientific work. That is often because I guess the people who write the guidelines are not so familiar with this work, are not so intimately involved with it. I think to produce good guidelines we need to incorporate more of that.

If we took our lead for example from the United States Environmental Protection Authority [EPA] which produced some very good guidelines of this sort in 2002, they went to that peer reviewed literature, the conferences, the journals and the people who are working in the universities and that sort of thing and government scientific agencies. They drew all that information together to provide them with the basis of their guidelines. I think if we did that we would have more helpful, robust guidelines that people could place greater reliance on.

**CHAIR:** Thank you for appearing before the Committee today, Mr Whitehead. It is very much appreciated. The Committee may wish to send you some additional questions in writing, the replies to which will form part of the evidence and be made public. Are you happy to provide a written reply to any further questions?

**Mr WHITEHEAD:** Yes, by all means.

**(The witness withdrew)**

**MALCOLM HUNTER**, Environmental Health Coordinator, Great Lakes Council, and, Chair, Septic Tank Action Group, affirmed and examined:

**JOHN FRANCIS ROSELAND**, Senior Health and Building Surveyor, Wyong Shire Council, and, Committee Member, Septic Tank Action Group, sworn and examined:

**CHAIR:** Before we proceed do you have any questions concerning the procedural information sent to you in relation to witnesses and the hearing process?

**Mr HUNTER:** No.

**Mr ROSELAND:** No, I am fine.

**CHAIR:** In what capacity are you appearing before the Committee?

**Mr HUNTER:** I am the environmental health coordinator with Great Lakes Council and also chair of the Hunter and Mid North Coast, Central Coast and Lower Mid North Coast Septic Tank Action Group.

**Mr ROSELAND:** I am senior health and building surveyor with Wyong Shire Council and also sit on the committee, having chaired the committee previously to Malcolm.

**CHAIR:** I draw your attention to the fact that your evidence is given under Parliamentary privilege and you are protected from legal or administrative action that might otherwise result in relation to the information you provide. I also point out that any deliberate misleading of the Committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Before we commence with questions, would you like to make a brief opening statement?

**Mr HUNTER:** I would like to thank the Committee for the chance to actually present today. John's and my experience with septic tank involvement goes back quite a lot of years. Both John and I have been very active in the Septic Tank Action Group that comprises of 16 local councils ranging from Gosford in the south, to Upper Hunter in the west and stretching as far north as Kempsey Shire Council. So we have quite a strong delegate membership there. Again we have quite extensive experience in the assessment of onsite sewerage management and also through local government.

**CHAIR:** You have come as the Septic Tank Action Group. Just adding a little bit more detail, because I was quite interested in it, what specifically would your functions be as a group?

**Mr HUNTER:** Generally we get together on a quarterly basis and we come together and try to set some ground rules in applying a consistent approach to the regulation of local government across local government boundaries and develop common policies that we can implement that each council would be happy to implement, again to coordinate a consistent approach.

**Mr ROSELAND:** The action group was primarily put together with the reforms that came in 1998. I was at Cessnock council at the time and a number of other councils not as wide as we are now formed the opinion that local government was being forced to implement these changes but not given the appropriate tools to be able to legislate effectively to meet the objectives. Initially that is why the Septic Tank Action Group [STAG] was put together. Following on it became a sounding board for councils, as Malcolm said, with the primary objective of consistency across those regions extending further as the committee got momentum and to the areas that Malcolm previously stated.

**CHAIR:** In your submission on page 1 you proposed the need for an accreditation system for private contractors and that this should be operated by the Department of Fair Trading or New South Wales Health. Could we have some comment on that part of your submission, please?

**Mr HUNTER:** Certainly. Certainly something that comes up quite frequently since STAG's involvement is the frustration that council has in terms of trying to regulate servicing providers. There is no real mechanism that we can use to impose penalties or restrictions of trade on servicing agents who quite frequently undertake quite a poor performance in servicing systems. It is our belief that the State government should probably take the leading role in ensuring that these servicing providers meet some kind of accreditation or

licensing requirements so that again there are stricter penalties that we can impose. We have referred servicing agents to the Department of Fair Trading with little or no response on feedback coming back on these people's performance. These people are servicing hundreds of systems in our local government areas and we know they are not performing a service in accordance with the New South Wales accreditation criteria.

**Ms CARMEL TEBBUTT:** The servicing agents, do they come from the companies that manufacture?

**Mr HUNTER:** The companies have their own representatives but a lot of plumbers who may have experience in on-site sewerage management can make application to council to become an accredited agent in our local government area. It is up to us to assess their skills, competence and ability to undertake the job. There are lots of inconsistencies in local government areas on the level of skills.

**Ms CARMEL TEBBUTT:** Do you send the servicing agents out or is it up to the individual?

**Mr HUNTER:** It is up to the homeowner.

**Ms CARMEL TEBBUTT:** To call the servicing agent when there is a difficulty?

**Mr HUNTER:** Yes.

**CHAIR:** Mr Hunter, are you telling us that from council's perspective there is basically no recourse for councils if servicing agents are not performing or doing their job?

**Mr HUNTER:** Very little.

**Mr ROSELAND:** The committee has identified this as a glaringly problematic issue—that we have no control over the people that are required by the accreditation of the system from NSW Health, when it goes into the ground, to receive a certain number of visits per year by a service agent. The committee has seen that as a big issue and has attempted, through its own guidelines, to have people submit their qualifications to councils and the committee to see if they have acceptable experience and criteria to go on that list. We have had little support from government. In a recent training workshop we held at Forster at the beginning of the month the question was raised with the NSW Health representative, Tony Bliss—I am paraphrasing his reply to the cohort—who said that he could not see any reason why someone that serviced a tank required some type of licensing to do that. I gave him the analogy that even a gyprocker requires a licence to hang gyprock on your wall when he exceeds \$500 in a contract. Surely environmental health must rate higher than the gyprocker—not degrading gyprockers. There was not much response to his questioning in this workshop. That is the sort of thing we are up against. We have paddled the canoe upstream for a long time and hopefully this forum may provide some solution.

**Mr HUNTER:** The Septic Tank Action Group [STAG] has developed its own policy that other councils can adopt for accreditation. It is not so much accreditation as approval for servicing agents to operate in their area. They must be able to tick boxes to say, yes, we are confident that the people who service these systems have appropriate skills and knowledge to do so.

**Mr ROSELAND:** There are questions about trade practices and restriction of trade and councils are wary of that issue and do not want to open up councils to liability with regard to court action.

**Mr THOMAS GEORGE:** We have heard so much about councils this morning. You are working with 15 councils. I note that you think that Great Lakes is the best-practice council, is that because you work there?

**Mr HUNTER:** Of course.

**Mr THOMAS GEORGE:** I am trying to understand what makes the three councils mentioned, and now Great Lakes, different to other councils?

**Mr HUNTER:** I am lucky, or unlucky, in that Great Lakes was the birth place of the local government reforms following the Wallis Lake hepatitis outbreak. Therefore, I do have a very supportive council in terms of what I am trying to achieve. I have more political support and resources available to me to be able to fulfil my position or role as environmental health coordinator and coordinator of our on-site sewerage management

program. We do have our natural systems section of council that also is very heavily involved in catchment management issues.

As a result of the Wallis Lake incident and of other councils I have worked in I have good connections with other State government departments and local oystermen. I did write the catchment assessment program for Port Stephens-Karuah catchment in 1999-2000, so I have a rapport with the oystermen as well. I work closely with different organisations such as the departments within council and external stakeholders as well. We have a multifaceted approach to safeguarding our lake system from environmental issues and public health issues. I do have a supportive council. If I mention on-site sewerage management ears prick up in the council. In that respect we have a lot of projects that we are involved with through other agencies as well. I am very fortunate that way, I guess.

**Mr THOMAS GEORGE:** Do you think that support has been brought about by the Wallis Lake incident?

**Mr HUNTER:** Undoubtedly.

**Mr THOMAS GEORGE:** And the loss to the community and the region?

**Mr HUNTER:** The political pressure due to declining tourism and the fallout for the industry after the Wallis Lake incident created a number of political issues. We do not want to have a repeat of that in our backyard. Absolutely that would be the main reason—it happened in our backyard and we do not want a repeat of that. If you have been to Forster and the Great Lakes area, it is beautiful. There is the Ramsar conservation area of the Myall Lakes. We live in a sensitive area as it is and council has a role in making sure that it is protected and conserved.

**CHAIR:** Our first speaker, Associate Professor Phillip Geary, highlighted a number of issues including lack of funding and State government intervention, but he highlighted political will. You made a point of saying you have a supportive council and hence you feel you are achieving. That is a point not to be lost.

**Mr HUNTER:** Indeed.

**Ms CARMEL TEBBUTT:** You were saying that you think there should be greater support provided from the State government. Is that going to support the issue of accrediting the service agents or are you saying that it is broader than that and about better or tighter regulation and funding?

**Mr HUNTER:** It is all tied in together. The State government has a role. For instance, the Department of Fair Trading licences plumbers, gyprockers and bricklayers and if they do shonky work that is the route for councils or individuals to take to get compensation. From the Septic Tank Action Group's [STAG] point of view we feel that the State government has a more important role in the regulation and support of local government through advancing on-site sewerage management.

**Mr ROSELAND:** I was going to expand on it a little. Prior to 1993 when council received an application to install an on-site sewerage management system NSW Health had to endorse that application. The local representative from NSW Health would come to council and he would get a stack of applications with all the details and over the week he would stamp them and provide feedback. Council could not approve that installation until it had that endorsement. In 1993 there was a raft of changes to legislation: the Local Government Act, Public Health Act—lots of things changed—and that was taken out of the sphere of NSW Health. In order to streamline the process it was a good thing but it took NSW Health away from the role of providing support, through information, to the environmental health officer or building surveyor and allowing them to use the NSW Health representative as a sounding board where a local government practitioner did not know the answer.

**Ms CARMEL TEBBUTT:** Would they be questions about the type of system being installed or whether that type of system is appropriate for the particular site?

**Mr ROSELAND:** It could be. As Mr Whitehead said in evidence, the questions could be about geology, hydrology, vegetation or evapotranspiration rates in an area.



**Ms CARMEL TEBBUTT:** Would a health inspector be able to provide that level of advice? Would it not be beyond his area of expertise?

**Mr ROSELAND:** Possibly. There may be other people within NSW Health to whom they could refer that issue. They are the central point of contact and could disseminate the information. That is basically how it worked prior to 1993.

**Ms CARMEL TEBBUTT:** It seems to me, in a sense, it is a function that is better managed by a level of government that is closer to where these systems are operating and where people are going to be affected should there be problems with them. If you try and pull that up to a level of government that operates across the whole of State and has responsibility for a vast array of other things, I am not sure you are going to get a better outcome.

**Mr HUNTER:** The other scenario is enabling councils to have broader powers to regulate those service providers and impose harsher penalties on those who do not do the right thing and on those who let their systems overflow and fail. At present councils do not have any control over that servicing agent. We can go back through the homeowner and say you have not had your system serviced in accordance with your approval to operate, which is our legal mechanism to having the system regularly serviced. That is imposed on the homeowner, which is unfair. They are contracting someone to do a job. It is a tedious process for everybody to take.

**Ms CARMEL TEBBUTT:** Because you do cover a range of councils and you have an opportunity to see how different councils manage the cost of the monitoring and regulation of the on-site sewerage management system: How do different councils do it? Are they levying a fee on individual owners?

**Mr HUNTER:** It is generally a user-pay system.

**Ms CARMEL TEBBUTT:** Is there wide variation?

**Mr HUNTER:** There are two different mechanisms for generating a fee. Our council generates a fee primarily through rates. It is listed as a separate item on the rates notice. We used to have an item on the rates notice and charge an inspection fee but we found that we were trying to raise budget by doing inspections. That meant going out during wet weather and charging someone \$65 for an inspection where we could not identify a lot because the ground was sodden. We decided to pull back and put it on our rates system. We have been around to every single one of our systems. We know the problem areas. We are fortunate in being able to do that. Other councils rely on a fee for service and inspect and generate their income that way.

**Ms CARMEL TEBBUTT:** When you brought in your fee on the rates notice was that controversial or was it largely accepted?

**Mr HUNTER:** Yes, it was largely accepted. The way we did it there was a saving. The worst case scenario was for a low risk system—we have a risk category—that was inspected once every five years. They were charged \$32 annually on their rates and one inspection fee. They were being charged the minimal amount. They ended up paying an extra \$5 per month for that service. That is not much when you are talking about the level of protection we are trying to afford. I am lucky in the location where I live as people are aware of on-site sewerage management issues. In other councils that may be a political move to up fees.

**Mr ROSELAND:** In Wyong shire we had a picket line at the front door the night it was going to council and signs with derogatory comments about my director.

**Ms CARMEL TEBBUTT:** Because you were bringing in a charge through the rate notice as opposed to an inspection?

**Mr ROSELAND:** That is right. We have subsequently moved away from the rate notice and we charge a sundry debt to the property, because we had legal opinion that we could not put it on the rates.

**Ms CARMEL TEBBUTT:** Was it going to go on everyone's rate notice or just those people who had—

**Mr ROSELAND:** Just those people that we knew had systems, because there are unauthorised systems out there that we do not know about.

**Mr THOMAS GEORGE:** The septic charge has certainly created a lot of discussion throughout the State. I said earlier to Mr Whitehead that I am concerned by the number of departments involved. You have now raised another department. We have local government involved, NSW Health, Primary Industries, Environment and Climate Change and now you tell me we have got Fair Trading.

**Mr ROSELAND:** And the Division of Local Government.

**Mr HUNTER:** And we have also got NSW Food Authority.

**Mr THOMAS GEORGE:** That comes under the Department of Primary Industries. As I said earlier to Mr Whitehead, if a robust set of guidelines was developed I am concerned, if everyone has their say in it, that it will be too difficult to enforce. But if it is left to local government, which is right on the job, we will have one body enforcing it rather than all these different departments involved. I am concerned about that and I would like to hear your thoughts on it.

**Mr HUNTER:** I certainly agree that local government is in the best position to regulate on-site sewage management; however, it comes down to resourcing and managing that in local government. Again I am lucky where I live; I do have the political sway and support whereas that is possibly not a priority for Wyong Council and other councils as well. Therefore if we do get a push from a State Government—there is always a lot of cost shifting in State Government onto local government—certainly a document that is robust that council can adopt, and that covers the issues, is a benefit to us. We have been waiting for many years for the silver book to come out—the environmental health and protection guidelines—a review of that. A lot of councils used that initially to help them upstart their on-site sewage management program. We had an Australian standard that was reviewed in 2000 that also helped continue that. It has just been reviewed again but that only relates to domestic on-site sewage management, it does not come onto larger scale systems, which is another issue that councils face. Certainly a robust document that covers the issues identified by local government in fulfilling their job would be a benefit.

**Mr ROSELAND:** Without doubt and the consistency approach—as we both said—is what the Septic Tank Action Group [STAG] prime objective is too because you have got people who say, "I go next door and they say I can do it, and you are saying I can't." If State Government as a whole promotes that direction it is easier for council, be it in the trench at the grassroots level.

**Mr JAMIE PARKER:** One of the important roles of State Government is harmonisation; so that everyone knows when they go from one council area to the next that they can expect the same. A few of the things you have raised are not particularly expensive and do not involve charging people in coming to that point—that is, the accreditation of the agents. If I can understand the process, at the moment when a new on-site sewage management system is being installed NSW Health accredits it?

**Mr HUNTER:** Under local government regulations it says it must have a certificate of accreditation by NSW Health but there are mechanisms where people can bypass that as well but the norm is, yes.

**Mr JAMIE PARKER:** Then that device needs to be serviced or maintained and part of that accreditation is a process that says every X-period of time an agent comes and maintains that. So if that system process was working well you would not need to have local government going out there and double checking because that process would—

**Mr HUNTER:** A lot of people argue that. They are saying, "Why am I paying council extra money when I am getting someone to come and service my system, and you get a copy of that report?"

**Mr JAMIE PARKER:** What you are saying is that because there are no standards for these service agents it means just about any Joe blow can turn up and say, "Yes, that is fine" and your qualified staff will go on-site and say, "Hang on, this isn't working" as we heard before. One way that we can significantly deal with this issue, and potentially stop duplication, is by having very rigorous standards for those service agents who are visiting the sites so that councils and the community is confident—

**Mr HUNTER:** We can be comfortable that they are doing their job.

**Mr JAMIE PARKER:** Because we do not want to have a situation where someone has to die or where scores of people are hospitalised in order for it to be a priority. Do you think if there was that kind of rigorous accreditation of service agents then the burden on local governments would be reduced?

**Mr HUNTER:** Absolutely. For instance, we have 1,000 aerated systems in our local government area—an aerated system is a mechanical treatment plant. It is not a passive system where you have settlement of solids. There is little bit more process involved in the treatment of the effluent. It is required to be serviced because there are mechanical moving parts inside and whatnot. The issue is that they are required to fill out a servicing report. They fill that out in triplicate. They keep one for their own records, they give one to the homeowner and they send a copy to council. We have 1,000 of them. That is 4,000 of these reports we get a year. So somebody qualified has to sit down and go through those reports and check each individual report to make sure that that system is not polluting. The servicing agent will tell the homeowner, "You need to fix this" and the homeowner goes: Hang on. It is going to cost me \$300 to put in a new blower. No, let's just let it run out the back for a while till I save up a bit of money. So then council has to come in. Not only do we have to monitor those reports but we then have to issue a letter to the homeowner and then probably go out and inspect those works as well. So it becomes quite tedious process.

**Mr JAMIE PARKER:** That is why you want generic reporting requirements, an online portal or something like that, where everyone can load up—I am not saying the State Government would do this—like with the Food Authority, so all the different local government fines, orders and notices go onto one website so it is all very clear.

**Mr HUNTER:** Something along those lines, absolutely.

**Mr JAMIE PARKER:** At the moment when the on-site sewage management systems are installed and there is a requirement for servicing over a period of time, is the council notified of how often it will be serviced and to make sure that it is serviced according to the service agreement?

**Mr HUNTER:** What we do from a local government point of view, from my council's point of view and from the councils I have worked for, is that we issue an approval to install, then when we have gone out and inspected that system to see that it has been installed in accordance with an approval, we issue an approval to operate. Depending on the type of system installed, they have different servicing requirements. We then put that condition on the approval to operate, that the system is to be serviced quarterly, six-monthly, annually or whatever it might be.

**Mrs TANYA DAVIES:** Going back to the description you have given the Committee about Great Lakes Council and your work at that council. You have told the Committee how you work very closely with the surrounding businesses and how you are very well respected by local industry—

**Mr HUNTER:** I would not say very well respected.

**Mrs TANYA DAVIES:** I am sure you are. Which other departments within council do you work closely with? Off the top of my head I am thinking perhaps of the development services area that receives development applications for new areas. Do you work closely with those sorts of departments to ensure the right checks and balances?

**Mr HUNTER:** We do. We have a development assessment panel that meets twice a week. That involves our engineers, our town planners, our building surveyors, traffic design team, environmental services and waste services. They meet together and all the development applications that come in are discussed by the panel for referral—who wants to have that development application referred to them—so they can place appropriate conditions on that particular development. But again we work closely with outdoor staff because they are out servicing our systems, cleaning them and whatnot. If someone has a problem with a system out there we will get into contact with another department of council to go out and make sure that has been resolved. We do have good processes internally as well.

**Mr ROSELAND:** It is a bit different at Wyong where unless it is large-scale development, integrated or State significant—it would not be State significant if council was looking at it—but generally someone like myself would take that from start to finish. We approve the development, approve the application to install, and

then finalise the application either for a construction certificate, if we are the accredited certifier on that job, and definitely the on-site sewage management application to install.

**Mrs TANYA DAVIES:** If there were an expert panel of people brought together who could basically tease out a new standard, code of practice or guideline for legislative requirements, do you have an opinion as to who you would recommend for that?

**Mr HUNTER:** Again the same comment that Mr Whitehead gave. Certainly not off the top of my head but, again, I have had involvement with on-site for a number of years. I have been to several of Joe's training courses and I have also been involved with Professor Phil Geary on a number of projects. I think probably those guys are in a better place because they are considered the industry experts. From a local government point of view, certainly I could point you to certain members of State Government that I think possibly should be on such a panel. By all means from a Septic Tank Action Group point of view and from a Great Lakes Council point of view, we would certainly be happy to have any input on that.

**Mrs TANYA DAVIES:** Page one of your submission refers to the difficulty and expense for councils to maintain databases on servicing reports, and that servicing reports vary in quality and are often not compliant with the maintenance requirements stipulated in the NSW Health accreditation certificate. Is there a need for a standard reporting template that can be used by all contractors across New South Wales councils?

**Mr HUNTER:** I do not see why not. The systems do have slight variation but typically they are the same internally. Certain systems do have minor variations and certainly I would like to get feedback on industry in terms of that. But from a local government point of view it is very similar reporting on different systems, certainly on the aerated systems—the aerated wastewater treatment systems—you do have slight variations with membrane filtration and whatnot, so there are extra add-ons that can go onto systems. But typically the bulk or majority of them are standardised. Yes, a standardised reporting system or formatted reporting system would be very beneficial in our belief.

**Mrs TANYA DAVIES:** To your knowledge has there been any consultation between local government entities and NSW Health on compliance with reporting requirements?

**Mr ROSELAND:** Not to my knowledge.

**Mr HUNTER:** Very little.

**Mrs TANYA DAVIES:** Are there any other forums or opportunities where these problems have already been discussed or are currently being discussed?

**Mr HUNTER:** In terms of getting a roundtable discussion about wastewater issues with other State Government departments and other local governments, the Septic Tank Action Group has been quite proactive in that. In the past four years we have run annual training seminars where we have invited—as John mentioned previously, we had one at the beginning of the month at Forster where we had representatives from the Department of Primary Industries, NSW Food Authority, NSW Health, University of Newcastle, industry experts and the Division of Local Government come in and present on topics that we asked them to present on through our Septic Tank Action Group committee discussions.

We would like a representative from NSW Health to come and talk to us about the accreditation process. We had a bit of an open forum during those workshops so that we could get direct engagement and get other councils involved. We opened that up not only to the 16 STAG member delegate councils but we also had other representatives come from northern New South Wales, western New South Wales and it was open to the greater western and southern regional groups as well. We had 55 delegates attend that workshop and it was quite successful.

I am aware that there is the Nepean STAG group, if I can call them the STAG group, the Septic Tank Action Group, the Hawkesbury-Nepean one; there is also the Greater Southern STAG group and there is also the Northern Rivers STAG group that I am aware of. Again they get together, meet and discuss issues common to them as well.

**Mr ROSELAND:** The chair of the Southern Area Health STAG group is actually in the public gallery today. He is an employee of NSW Health and he convenes their group meetings.

**Ms CARMEL TEBBUTT:** I have two questions. Firstly, so I get clear in my head about the servicing agents, is it your view that the bigger problem is that the servicing agents are not doing a particularly good job of identifying problems and keeping the system well operating or is the bigger problem that the individuals who come in on the on-site sewage management systems are not fixing the problems when they are identified, either because they cannot afford to or for whatever reason?

**Mr HUNTER:** There are the public health spin-offs on that.

**Ms CARMEL TEBBUTT:** I am trying to understand if the problem is with the servicing agents or the individuals?

**Mr HUNTER:** You could have a fantastic servicing agent who does a wonderful job and asks the homeowner to fix a certain part of their system that may be failing but then you have a homeowner who may not be able to afford or does not particularly care.

**Ms CARMEL TEBBUTT:** That is right; that is what I am trying to understand better. You might not have the data.

**Mr HUNTER:** I do not think I have the answer to that because it is a twofold question. If you have a very poor servicing agent who does not even tell the homeowner, then the homeowner is not going to be aware. If you are talking about servicing agents, then our belief is that the servicing agents need to have more stringent guidelines to adhere to. As you will see in some of the other submissions that I am sure you will discuss later, council has very poor penalties to impose on owners in terms of on-site sewage management. A \$330 fine is not a huge incentive for a homeowner to jump up and down, unless they are directly polluting where we can apply different legislation. It is twofold.

**Ms CARMEL TEBBUTT:** The submission from various government agencies indicates that the number is serious food safety events in New South Wales is very low compared to other countries, particularly looking at western-producing countries and the issue around oysters, which is your area of interest and expertise. Is that your understanding also? Do you think that irrespective of the problems you have identified, that largely compared to other countries we have a relatively safe system?

**Mr HUNTER:** Certainly, absolutely. Oyster growing on the east coast of New South Wales is the primary concern when it comes to food contamination from on-site sewage management systems. You are talking about domestic wastewater here. When you are talking about individual on-site sewage management systems contaminating large food crops, I do not think it is an issue because they are growing out in market gardens, large areas. The chance for an on-site sewage management to come down and contaminate the whole of that crop I think would be very low.

**Mr THOMAS GEORGE:** I go back to the first part of the question from Carmel. When a service agent finds there is a problem with the system and whether the person is going to fix it up depends on where the property is situated, the type of country and how urgent it is to get fixed up?

**Mr HUNTER:** Exactly.

**Mr THOMAS GEORGE:** Someone on the river flat, near the water may have a little problem that is more urgent than the person who is up in the sand hills miles away from the creek?

**Mr HUNTER:** To summarise that, what we are trying to get at is that if we had tighter controls on the servicing agents, then the reporting that comes back to council is a lot more confident; we can be confident that what they are reporting on is correct. We can actually go out, and if we get better penalties imposed or a better process to rectify that issue, then we are not having a long-winded, drawn out process where the risk to public health and the environment is quite significant.

**Mr THOMAS GEORGE:** One could be urgent and the other might be a bigger problem but it might not be as urgent?

**Mr HUNTER:** Exactly. If there is one immediately adjacent to a waterway, that is a high priority. If it is out on the middle of acreage, we will get to it when we can.

**CHAIR:** You just said that the on-site system having the ability to contaminate a crop would be very low. I imagine you are talking about maintenance issues there or a faulty system. In a couple of submissions—and I think we will hear later—the systems may be working very well but market gardeners or people are not doing the right thing, and that is where regulation needs to come in.

**Mr HUNTER:** Or education.

**CHAIR:** Or education, because I think whole crops are potentially being contaminated but not necessarily through a faulty system but through lack of education and through bad practice. That is in a couple of submissions.

**Mr HUNTER:** I do not disagree there either, if people are doing the wrong thing.

**CHAIR:** That is something we need to do. It seems clear from nearly everybody's submission and people associated with the industry or industry bodies that everybody is looking to State Government to set clear guidelines, accreditation criteria, standard templates, all those things to enable regulation but for local government to then administer it and to ensure that it is funded to do so. We need to set the guidelines but we are too distant and too removed; local government needs to but not in its current form as it is severely underresourced. That seems to be coming from everywhere.

**Mr HUNTER:** I think that is what I am hearing as well.

**Mr ROSELAND:** I agree.

**Mr HUNTER:** Through reading all the submissions, absolutely.

**Mr THOMAS GEORGE:** Great Lakes Council is very cooperative and proactive and is known for its oyster farming. Are there other councils with farm interests that are not proactive?

**Mr ROSELAND:** The situation is a bit different in that Great Lakes and Port Stephens do have the oysters so therefore the papers would get hold of that quicker than the water authority. The majority of our systems are in our drinking water catchment. Our catchment managers report failing systems. We have a few large commercial systems in our drinking water catchment. We tend not to get algal blooms, which is a good indication of failure of systems and they do not come back with counts that they would expect from failing systems. Wyong and Gosford as well have installations in their drinking water catchment—we are a co-water authority—and it does not come to the fore so you do not hear about it. Where it is oysters, people see that you eat oysters in the same state as they are sold to you. You do not generally cook them and if you do cook them—oysters Kilpatrick for example, if you have a norovirus outbreak and it is in the oyster it is still going to make you sick. It is more prevalent than the people who are drinking the cup of water down at Kanwal on the Central Coast, who say, "This is nice clear water; we don't have a problem."

**Mr HUNTER:** You are right. Different councils have their own focus. Some of the Upper Hunter shire councils, why would they need to go and spend hundreds of thousands of dollars on on-site sewage management reforms because the threat to their environment is not as significant as it is to our coastal councils.

**CHAIR:** Thank you very much for appearing before the Committee today. The Committee may wish to send you some additional questions in writing, the replies to which will form part of your evidence and be made public. Are you happy to provide a written reply to any further questions?

**Mr HUNTER:** I am.

**Mr ROSELAND:** Yes.

**CHAIR:** Thank you very much; that was most helpful.

**(The witnesses withdrew)**

**(Luncheon adjournment)**

**DEBORAH LENSON**, Divisional Manager, Environmental Services, Eurobodalla Shire Council, sworn and examined:

**REBECCA DORWARD HARDWICK**, Environmental Health Officer, Eurobodalla Shire Council, affirmed and examined:

**CHAIR:** I welcome Ms Deborah Lenson and Ms Rebecca Hardwick from Eurobodalla Shire Council as witnesses here today. Before we proceed, do you have any questions concerning the procedural information sent to you in relation to witnesses and the hearing process?

**Ms LENSON:** No.

**CHAIR:** I draw attention to the fact that your evidence is given under parliamentary privilege and you are protected from legal or administrative action that might otherwise result in relation to the information you provide. I should also point out that any deliberate misleading of the Committee may constitute contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Before we commence with questions would you like to make a brief opening statement?

**Ms LENSON:** Yes, I would. I will provide a very basic overview; obviously you have the submission and Rebecca will be able to provide you with much more technical advice than I. We in Eurobodalla are located on the south coast of New South Wales. We have about 4,500 on-site management systems within our shire. Of those, 1,000 are aerated treatment systems, which you were referring to previously, which are the ones that require the accreditation process. There are a variety of different systems obviously that require different approaches as well. We have five major estuaries within our shire council area and four of them support oyster farmers, oyster growing, and we have numerous intermittently closed and open lakes and lagoons [ICOLLS] and waterways. We have a very strong tourism industry and we obviously enjoy a very beautiful and quite pristine area in regard to the environment that is in our locality.

The issues for local government—and I obviously do not want to repeat what you have already heard today, and you may want to pick up on different items in our submission to you—but local government has competing priorities and OSMS is only one of the issues that we have to deal with. The willingness of councils can vary across the State and the political arena varies, and obviously that impacts on councils in regard to potentially how much emphasis is put in the arena of management of on-site sewer management systems. Resourcing for local government is a huge issue, and whilst we have been discussing fee-for-service and a user-pay program, which Eurobodalla has implemented for some time, it still does not cover the cost of implementing a program satisfactorily. So whilst we may have approval processes and inspection processes there is a lot more that we endeavour to do and could do, but that requires resourcing.

The community expectations vary across the State and when there is a cost imposed there is also with that an expectation that those costs are generally as low as possible, and council is at the coalface of dealing with those community expectations, certainly from that fee-for-service and whether or not there would be an application of consistency across the State as to the cost of those service deliveries. From local government we would welcome the support of State agencies; we see local government as being the appropriate authority to undertake approvals and inspections, but we do require the backup and support of the State Government, and that has probably come through to you also today. That also may be in education programs for the community in better understanding how systems operate and how they can ensure that they are operating the systems as effectively as possible.

The cost of approvals is continuing to increase as we see the requirements becoming more heavily mandated, and an on-site sewer management system is only one process within a development application process. There is an expectation of councils to deliver development assessment approvals in a timely manner, and that requires us to assess our on-site sewer management systems as part of that DA approval process. So it does provide time constraints and it does then have some influence in that political arena of delivering services, yet with all the expectations that are required of local government. In the additional submission we provided at late notice yesterday—

**CHAIR:** Just on that, I might stop you there. Did you wish to submit that or table that additional submission, because if you do I am happy to go through that process? Would you like that information you gave us yesterday put into this hearing?

**Ms LENSON:** Yes, we do.

**CHAIR:** I direct that the Eurobodalla Shire Council additional submission to the Committee on Environment and Regulation Inquiry into the Management of Domestic Wastewater be attached to the evidence of the witness to form part of the evidence.

**Document tabled.**

**Ms LENSON:** In terms of that additional submission, some of the areas that have not been covered today are in regard to the legislation. First, the Environmental Planning and Assessment Act is currently up for review. There has been discussion of the placement of section 68 under the Local Government Act, which is the approvals for on-site sewer management systems, and that discussion should be in a planning assessment Act rather than in a local government Act. I am not providing the answer I am just raising that that may be a matter that comes out of the other review. The other concerns have been highlighted to you in regard to the fines. We believe that they are probably insufficient to curtail inappropriate behaviour. The other item we raised was the notice of entry. The difficulties that have arisen are two-fold, and I will not read through that; there certainly may be some questions that the Committee has of us of those matters and we are happy to elaborate on that.

Lastly, just in opening, whilst legislation is obviously a requirement, I would also say that whilst we need regulation we do not want to curtail innovation and improvement in on-site sewer management systems. We need to be looking forward to other technologies, and that requires the State to take the onus on that to ensure that those new technologies can still be sound and provide council with the guidance of those systems that we can therefore approve in our particular areas.

**CHAIR:** Clearly in your submission you identify the importance of the oyster industry in Eurobodalla shire. Could you elaborate on what risks are posed to that industry just by the inappropriately maintained or faulty on-site sewer management systems, and also have there been any major pollution incidents within your shire of recent times?

**Ms HARDWICK:** We have not had any major incidents. We work closely with the local oyster industry group. We do estuarine monitoring once a month. If we pick up anything there we will investigate. If the oyster growers pick up anything in their monitoring they will advise us to investigate. We also have our regular inspection programs; systems close to watercourses are inspected annually. To date we have been fortunate.

**Ms LENSON:** It is very difficult to ascertain a point source if you identify pollution in the waterway. You might suspect something but to link it directly to a system would be extremely difficult.

**CHAIR:** Ms Lenson, you mentioned the unique waterways and in your submission you mentioned some geographical features that make the region particularly susceptible to contamination from faulty on-site sewage management systems, examples being clay soils with poor nutrient retention and steep slopes. Is this unique to your region or is it wider afield?

**Ms HARDWICK:** Australian soils are quite old so they are not the most fantastic at holding on to nutrients. That applies pretty much nationwide; you will get patches of excellent soils. Slope is not uncommon. We are getting to the edges of development and all the easily developed land has gone. Now people are developing the more constrained land so we are trying to find a balance between a developer wanting maximum yield and our needing to make sure it is sustainable.

**Mr JAMIE PARKER:** The document refers to the fact that in 2003, 75 per cent of on-site sewage management systems in Eurobodalla required work to comply with health standards but in 2011 the figure was only 15 per cent. That sounds like a good result. What steps did the council or the community take to increase that level of compliance?

**Ms HARDWICK:** Basically our inspection program, engaging with the community both through education and the inspections. We completed the first cycle and made sure every system had been inspected by 2008. Once everyone knew what was required of them we started to ramp up compliance. Where it had been a less formal process of getting people to comply we then started following up to make sure everything was spot-on, getting confirmation, re-inspecting if things were not right and charging a fee—dollars always matter and you get more compliance if you start talking money—and starting to issue notices and orders.



**Mr JAMIE PARKER:** You have spoken about the \$330 fine being inadequate. Can you talk us through your experience of the process of negotiating with the owner of a facility and what happens if improvements are not made after an order is issued? What happens if people do not pay?

**Ms HARDWICK:** We have a code of practice and we have virtually a flow chart showing what the process is for people. Basically we send them a letter the first time saying that we will be coming to inspect their property. We undertake the inspection and advise them of what work needs to be done. If they do not complete the work we send a reminder letter and give them another 14 days. If the work is still not completed we will re-inspect. We then give them another time frame depending on the risk involved. We are flexible; we allow extensions and the like. Then, if it is not going to be a huge threat to watercourses or public health we look at issuing a notice of intent under the Local Government Act. If nothing is done we issue the notice, which comes with an administration fee. If they fail to comply we can issue fines, but it is only \$330. You can go down the other pathway and ask them straight out to show cause why they should not be fined directly. There are two pathways. If it is something that requires immediate attention and is threatening a watercourse we use the Protection of the Environment Operations Act and have a preventive clean-up.

**Ms CARMEL TEBBUTT:** When you put the program in place from 2003—

**Ms HARDWICK:** We started in 1998 and in 2003 our initial code of practice was operating and we completed the first round of inspections.

**Ms CARMEL TEBBUTT:** Did you have to put an extra charge on ratepayers to fund the improved program, how did you do that and was it controversial?

**Ms HARDWICK:** It was controversial. There are two ways you can charge. One is the \$30 that people talk about and every year you just roll over the approval. We started with that and we then went to a user-pays system and charged for inspection. We initially started charging mileage plus an inspection fee for the more distant people, and villages got charged less. That had the rural people very upset so we went to a flat fee. We are moving more towards taking the pressure off compliant people and if they are a medium risk and they look after their system for a certain length of time they can go down to low risk. We are rewarding them for good behaviour and putting more emphasis on the people who are not complying.

**Ms CARMEL TEBBUTT:** Previous witnesses have identified issues with the service agents and wanted them to be accredited as that would mean they could focus their efforts where there were problems because they would have greater trust in the reporting from the service agents. Has that been an issue in your shire as well?

**Ms HARDWICK:** Very much so. We have some fantastic service agents and there are some shockers that we cannot control. It is creating more work for us and creating extra cost for the homeowner because a poorly serviced system is going to break down more often, plus it places your family and friends at risk.

**Ms CARMEL TEBBUTT:** You raised in your opening comments, Ms Lenson, whether section 68 should be in the Environment Planning and Assessment Act or should remain in the Local Government Act. That may be examined in the review of planning at the moment. Do you have a view as to where it would be better placed or what the difference would be, or does it not really matter from your perspective as long as it has the necessary controls and enforcement requirements?

**Ms LENSON:** Given it is an approval process and it is part of the development assessment consent I think there is merit in it being in the Environment Planning and Assessment Act. I think the same considerations should still be taken into account and it should not diminish the significance of the relationship with health, but it is quite disparate at the moment and that provides a bit of confusion for the management overall in where and how we deal with on-site sewage management systems. We already deal with them under the Local Government Act and under the Protection of the Environment Operations Act—there are multiple areas that we potentially have to utilise.

**CHAIR:** Malcolm Hunter, the chair of the Septic Tank Action Group also referred to the service agents. It is becoming clear that councils have an inability to police those agents. Is that something you would like to see come out of this inquiry—greater guidelines and maybe more enforcement possibilities for those agents? Do you find you are hitting your head against a brick wall? What is your view on that?

**Ms HARDWICK:** Strongly in support of seeing particularly that they be accredited or licensed with NSW Fair Trading and there is some control over them. All our accredited agents in the shire have training; they have all gone to the courses and they have all ticked the boxes but they are looking at the dollars. The bad ones are whacking six chlorine tablets in the tank and that is it. We open up the tanks and they are filthy, the sprinklers are broken and the pumps have stopped. It is just a mess. It would take so much pressure off us to regulate if they were doing the job properly.

**CHAIR:** You mention strongly in your submission the inadequacy of the \$330 penalty infringement, as have other witnesses before you and as later witnesses will do, as I have read their submissions. Do you have any recommendations? Obviously you are not going to say how much it should be. Should it be comparable to other fines that you currently use for other areas in local government? Do you have any guidelines for the Committee?

**Ms HARDWICK:** I think it should be similar to the Protection of the Environment Operations Act fines, which are \$750 for individuals and \$1,500 for corporations. That seems to have a lot more effect. Also, an order that is more specific to on-site sewage management systems. The ones we use at the moment are a bit vague and hard to enforce sometimes.

**CHAIR:** Just for clarity, it is obviously not just the financial value but a set of guidelines that enable you as a council to put something before the offender that they must take note of and must adhere to?

**Ms HARDWICK:** And something they understand.

**CHAIR:** At present it is very wishy-washy with the time frames and what have you?

**Ms HARDWICK:** Yes.

**Mrs TANYA DAVIES:** You mentioned a code of practice that has been developed. Could you outline briefly some of the unique features of your code and why you think it is working well for your shire?

**Ms HARDWICK:** I am happy to table a copy of it. First we took it to the community. The designers were asked what they wanted in the code of practice. Because we are such an environmentally sensitive shire we have ended up having to be quite prescriptive in what is required. We have tried to tie together all the different standards, the guidelines, the silver book, plumbing and drainage, and we have included how to deal with grey water and what we require from a service agent. We have put in a flow chart of our inspection process. We have tried to put the whole process into one document that people can read.

**Mrs TANYA DAVIES:** What is your opinion of the silver book?

**Ms HARDWICK:** It is out of date. I agree with what previous witnesses have said. I have not had a really good look at the new standard. There is a lot more information in it so I think it will be a much more workable document. I envisage the silver book being replaced by something smaller and referring more to the standard but just outlining specifics for New South Wales. For example, it is quite vague on buffer distances. New South Wales could say it wants certain buffer distances to be adhered to. It is an opportunity to tie the two documents together.

**Mrs TANYA DAVIES:** Clearly you drew from quite a wide range of literature and pieces of information to put together your code of practice although some of that information is contradictory. How have you dealt with that to put together a uniform code and can you give an example of information that is contradictory?

**Ms HARDWICK:** We have looked at our shire and what we have experienced in our area and where it makes the most sense or it has the best science behind it. Where we have over-ridden one with the other it tends to be more over-riding the silver book with the standard. To give an example, the silver book refers to a minimum area method for working out your disposal area. There are two parts: the hydraulics and the volume of effluent that comes out, and then you work out the nutrients. When you have done your calculations the largest figure becomes the irrigation area.

Because of our poor soils, we might end up with an irrigation area of a thousand square metres when they only need a hydraulic area of 200. If we use the minimum area method, then we might make them put a thousand square metres worth of pipe work in the ground when they only need 200. That is an extra cost to the customer and it is not a particularly effective solution. We have overruled that and said: We are going to make you just put it in the hydraulic area but show us where the nutrients are going to go, so they follow the slope of the land and so on and we will reserve that for that use. It is not an exact science, it is more that we could get no guidance from anyone on it, so we have had to use what knowledge we have had.

**CHAIR:** I ask on that point, every speaker before you has said, "We have got the silver book but we would like specific guidelines". You are the first person who has given an example, yet how could you develop a specific guideline for that? You could not, could you?

**Ms HARDWICK:** No.

**CHAIR:** That is good because it is something we need to be aware of. Up until that point I have sat here—and probably most of my colleagues have—thinking that the State Government can legislate everything. But clearly there are areas where we cannot. That example you just gave is a good one. How would you give a specific guideline on that when, in fact, it is your knowledge, expertise and commonsense we would rely on as a local government employee to provide a good outcome.

**Ms HARDWICK:** It is like what Joe Whitehead said about making sure it is not too prescriptive.

**CHAIR:** Guidelines, but with a flexibility component, obviously?

**Ms LENSON:** It appears that in a lot of approvals we do have to take them on a case-by-case basis and there is going to be specific guidance that will dictate that site and the systems that we use. But the guidance does need to be flexible, in terms of what approach we can take and we still need to have some parameters around the information.

**Mr JAMIE PARKER:** This question goes to getting a handle on the size of the problem. Your submission refers to the fact that in 2003, 75 per cent of the devices required work in order to comply with either the health standards or environmental standards. So what I would like to get a sense of from there is, has the increase in compliance and the reduction in faulty systems led to significant environmental benefits or significant health benefits? We obviously have to look at the cost benefit of these types of things. You have put in a lot of effort. What type of benefit have you seen as a result of the council being able to take this on?

**Ms HARDWICK:** I think we were in the fortunate circumstance that—unlike Great Lakes—we were not actually having a problem that was affecting people, that we knew about. Going on to properties now, we are no longer likely to find a soggy patch in the back lawn that the kids and the dogs are running around in. From a safety point of view, just from the infrastructure of the tanks, they are a lot safer. People are getting educated, so it is preventative as much as anything.

**Ms LENSON:** I think it is based on the precautionary principle. The inspections are there and we are trying to ensure that people are conducting their systems correctly. Evidence on public health and environmental improvements is difficult to ascertain so I am not sure that we could point to specific evidence but we would be operating under the precautionary principle under ecologically sustainable development [ESD], so I think that is fundamental and sound.

**CHAIR:** This question is one that we have asked everybody else, and it comes from Mr Whitehead's submission. If the guidelines were to be updated by a panel of experts, would you have any views—and I am happy to take it on notice—as to industry experts that should be on that panel. I am yet to hear anybody say, "me". So do not be shy—you are all here because you are experts. Would you recommend anybody for that panel or would you like to get back to us on that?

**Ms LENSON:** I think we will take it on notice.

**Ms HARDWICK:** There was meant to be a committee convened by the NSW Department of Health to look at systems. At page 4 f. of our submission there is a quote where they suggest membership to include:

Representatives from the Environmental Health Branch of NSW Health, Departments of Land and Water Conservation, Local Government, Urban Affairs and Planning, and the Environment Protection Authority; and the Australian Institute of Environmental Health.

That gives a suggestion of where we should be drawing people from, as well as private people such as Joe Whitehead and Professor Geary.

**Mr THOMAS GEORGE:** That is from a health perspective. What about from a practical grassroots perspective where you are working, would you add other suggestions to that?

**Ms HARDWICK:** There are a lot of good people at local councils and at NSW Health who know what is happening on the ground.

**Mr JAMIE PARKER:** At page 4 of your submission, you say that the NSW Department of Health's Accreditation Guidelines Committee has not met for five years.

**Ms HARDWICK:** I do not know when it met. It may have never met.

**Mr JAMIE PARKER:** Maybe that is something we can ask the Government representatives when they come. I just wanted to see whether or not it has met. To your knowledge, it has not met for five years?

**Ms HARDWICK:** That is as long as I have been dealing with on-site sewage management systems [OSMS] and it has never met.

**CHAIR:** In your submission, you make it clear that Eurobodalla has a diverse range of OSMS. Does any one OSMS in particular present a greater risk of leakage than others and specifically, do you see any concerns with life expectancies or timeframes of usefulness within different OSMS?

**Ms HARDWICK:** If they are properly designed, they should all have a decent life span of in excess of 20 years. We would like to see longer. We have raised concerns again in the submission at number 12 on page 12, under "Wet Composting Systems". We have concerns that we have been unable to get addressed about the design of those. That they may not be sustainable and I think there would only be a small change in the design to make them much more effective. We are concerned that they could lead to problems in the future.

**CHAIR:** If an application gets put in for one of that specific system within your council, how do you respond to that?

**Ms HARDWICK:** We have identified that our concern is of fines going through the system. Worm castings will not break down completely, so it is just like normal humus and the fines are being allowed to pass into the disposal area. We are just asking, as an addition to that tank, that the designer provide some information of how those fines will be prevented from entering that disposal area. We are looking at various designs coming in for that but because they have been accredited by NSW Health, we have to consider them and I think we would be on shaky ground if we refused them.

**CHAIR:** That is an interesting point and one that I think we need to take on board. The people in local government are the experts and that is where we have to have that communication happening. You have found something that you are unhappy with, yet it is legislated that you have to be happy with it. So I think that is a good point that needs to be addressed in terms of communication. We have sat here the whole day saying, "State Government needs to legislate to local government". That is the way it is but you are right, local government needs to be able to have that filter back to State Government and we have to listen to those types of issues too, so that is a good point.

**Mr JAMIE PARKER:** What are your charges, so we can get an idea of what the costs are on communities for your work?

**Ms HARDWICK:** We charge \$104 for an inspection, \$134 for reinspection and for applications, we have charges for those.

**Mr JAMIE PARKER:** In terms of how often those charges are applied, can you tell us a little about that, depending on whether it is low, high or medium risk, how often those inspections are required?

**Ms HARDWICK:** If we carry out an inspection that is when it is charged. High risk is every year; medium risk is every two years; and low risk is every five years. We also offer an opportunity for the high and medium risk people who can demonstrate that they are looking after their system and operating it safely. They can apply for a conditional downgrade to the next risk grading, so as long as they keep operating it and it remains in their ownership. If they live there and do not rent it out—conditions like that—then that is a reward to them for looking after their system.

**Ms LENSON:** We only introduced that system recently and I would say that if we were assured of the accreditation of the servicing of the aerated systems, there would be potential for those landowners to downgrade those systems, if that was appropriate.

The other issue we have with our inspections is the entry and notice of entry. That was one area that we did provide a solution for in regard to a potential change in legislation. If we are not provided with consent from the owner, we have to provide a notice of entry that stipulates the date of the entry. There are concerns with that because if they are conducting any activities that are illegal or inappropriate, they can curtail that behaviour knowing that the inspection is to occur. Also it is more time consuming and costly for us in having to stipulate the date. It is more paperwork and more administrative work and it takes more time for our staff. That has been a concern for us and I would suspect for other regions as well.

**CHAIR:** The Committee has received the Code of Practice for Eurobodalla Shire Council. I direct that that document be attached to the evidence of the witness, to form part of the evidence. The committee may wish to send you some additional questions in writing, the replies to which will form part of your evidence and be made public. Are you happy to provide a written reply to any further questions?

**Ms LENSON:** Yes.

**(The witnesses withdrew)**

**CHAIR:** Before we get to the official swearing in of the next witnesses I must declare an interest. We have Ms Nicole Magurren in the gallery. Three wonderful Camden council staff here today and they do an outstanding job and are an asset to the community.

**Mrs TANYA DAVIES:** Before we commence taking evidence this afternoon I would like to also thank Mr Anthony Price from Penrith City Council for being here. He is an outstanding, dedicated environmental ambassador with a very strong commitment to the Penrith local government area, in which I live and am a current city councillor.

**ANTHONY PRICE**, Environmental Health Coordinator, Penrith City Council, affirmed and examined:

**JAYNE LOUISE CHRISTIE**, Environmental Health Officer, Camden Council, and

**FIONA STALGIS**, Team Leader for Environment and Health Branch, Camden Council, sworn and examined:

**CHAIR:** Before we proceed do you have any questions concerning the procedural information sent to you in relation to witnesses and the hearing process?

**Ms STALGIS:** No.

**Ms CHRISTIE:** No.

**Mr PRICE:** No.

**CHAIR:** In what capacity are you appearing before the Committee?

**Mr PRICE:** I am the environmental health coordinator at Penrith council?

**Ms CHRISTIE:** I am an environmental health officer with Camden Council.

**Ms STALGIS:** I am the team leader for the environment and health branch at Camden Council.

**CHAIR:** I draw your attention to the fact that your evidence is given under Parliamentary privilege and you are protected from legal or administrative action that might otherwise result in relation to the information you provide. I also point out that any deliberate misleading of the Committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Before we commence with questions, would you like to make a brief opening statement? I think it is more than fair that Camden gets the opportunity and Penrith does too if you would like to.

**Ms STALGIS:** Thank you to the Committee for having us here today. Firstly I would like to state Camden does not have any oysters; however, we do have market gardeners. These market gardeners and their disposal of wastewater often present concerns for officers. We have not inspected all of our farms; however, issues do arise when environmental health officers inspect the septic systems at these premises. In our experience the onsite sewage management systems are often non-compliant, and it could be as high as two out of three that are non-compliant.

The Local Government Act, the primary piece of legislation for domestic wastewater, does enable us to serve orders and to fix the tank and the disposal field. These provisions are time consuming, cumbersome and often the circumstances of the failing tank reoccur. The process begins again. It is a constant battle. Mechanisms under the legislation and procedures to deal with the crop that may have been contaminated by discharge from the septic system are substantially lacking for the now contaminated crop.

This issue should not be about making legislation that is so impractical or difficult that small farmers cannot comply. We believe in the short term it must be about readily being able to deal with the contaminated crop and it must be supported by education and avoiding the issues in the first place. The only other point I would like to make before we start is that we believe that wastewater needs to stay on the agenda of all levels of government and we would encourage some type of statutory committee perhaps both for food crop and for wastewater in general.

**CHAIR:** We have just been given two documents from Camden Council entitled "Sewage Management Strategy" and "Failing of Onsite Sewage Management Systems on Market Gardens". Would you like those to be part of these proceedings?

**Ms STALGIS:** Yes, please.

**Mr PRICE:** In Penrith we have got approximately 4,700 systems and we have a significant rural area in Penrith. In terms of land size, about half of Penrith is rural land. That is made up of rural villages and larger lot holdings. Historically the big issues have been on the smaller properties in rural villages. We have been

lucky enough to have Sydney Water come in and put in a reticulated system in some of those areas so the big problems that you would face from people pumping out septic into the streets and the like to minimise their costs in pump-outs has reduced quite significantly since that time.

Nonetheless, the task of administering a system of that number of systems I would say at some stage is beyond the capacity of local councils. We have officers that do their best. We have actually had to in our strategies implement measures for prioritising which systems we attend to first. Do we target? Do we do random inspections? Do we give five-year and two-year approvals depending on the classifications of the system according to our onsite sewage management and greywater reuse strategy. We are currently reviewing that strategy now to try to keep it contemporary but, as you may have heard from previous speakers, there are several documents and guidelines that have been put out there.

The Department of Environment and Climate Change, now the Office of Environment, have their own guidelines on the use of irrigation of effluent. We have the Australian standards and we have the silver book which you have heard of as well. Each of them have their own way of calculating how effluent should be disposed of on properties and we have tried to do the best to write a policy that is consistent, keeping in mind the hydrology calculations that are predominantly in the Australian standards, the hydrology and the nutrient calculations in the silver book and the calculations which bring in other sorts of factors in the Environmental Planning and Assessment guidelines as well. So it is generally a fairly large task and for a large number of years we have always tried our best to stay on top of it but, as I mentioned, administratively it is a very difficult task for a council—even for a council the size of Penrith.

**CHAIR:** The Committee has heard from numerous oyster growers and Ms Stalgis pointed out we have got none in Camden and none in Penrith, but both Penrith and Camden councils have referred to the inappropriate practice of using wastewater to irrigate crops and potential threats to local horticulture. How extensive is the problem in each of the areas?

**Ms STALGIS:** We are not certain how extensive it is. We did a calculation the other day off Google maps and we believe that we have 130 intensive market gardening operations. As I mentioned in the introduction, we believe approximately two out of three if not higher are failing each time we attend those premises.

**Ms CARMEL TEBBUTT:** Are failing in the use of wastewater?

**Ms STALGIS:** That is correct. So the septic tank is not operating in a satisfactory manner and emergency orders and orders are required to rectify the disposal field.

**CHAIR:** And it is two out of three?

**Ms STALGIS:** As high as two out of three, if not greater.

**Mr PRICE:** Again I would start by saying it is hard to quantify the amount that are not doing the right thing. I did bring some aerial photography of some of our market garden areas, our primary producing areas. I have only given the road and the suburb; I did not think it would be fair upon the property owners to do them in. I am not saying that these people are doing the wrong thing but when we go out onto a property whether or not they are directly using effluent on produce, more often than not all the water in management on the site does end up with effluent or highly nutrient waters ending up in dams which is then re-irrigated on crops. Some of them do have the irrigation very close to food crops. But, to answer your question, quantifying it would be a difficult thing.

**CHAIR:** That is fine. It just gives us an idea. Camden Council has proposed that State authorities be equipped with powers to seize or dispose of crops irrigated with human effluent. Penrith council has similarly suggested the prevention of sale or consumption of food irrigated with contaminated wastewater. Could each council elaborate on how they would like to see any such power devised and enforced? What you are saying makes perfect sense. Tell us how you would do it.

**Ms STALGIS:** Under the Food Act at present my understanding from food authority officers is that the Act relates to cut crop, so it does not relate to unharvested crop or crop that is still sitting in the pasture. We would propose that the Food Act be amended to allow the seizure powers that they have for other foods, say the retail industry, manufacturing and for cut crops, that that be extended there. It is not a matter for local

government to be doing the seizure. Yes, wastewater remains with us but the actual food product should be the responsibility of the food authority and perhaps some sort of reporting mechanism—whether that reporting mechanism is a procedure where council officers notify the food authority as they come across them. Maybe service agents could be required as well, as they are servicing systems when they see a failure where wastewater is either draining to a farm dam or to the crop directly that they are also obliged to notify the food authority so they can take action.

**Mr PRICE:** When we are on the property we predominantly follow the guidelines that I mentioned previously. Also in our submission we talked about having I guess the ability to understand whether there is clear scientific evidence surrounding whether or not the crop would be contaminated and that on the indicators that might be presented to us if we feel that the crop is of a risk then, yes, we can also notify that matter to the food authority.

**Ms CARMEL TEBBUTT:** I am trying to understand the use of wastewater in food premises. I think in Penrith council's submission you say that operators should be required to seek approval or get a licence prior to using wastewater, but then earlier you say the food authority does not allow the use of wastewater unless prior approval has been obtained. What would be the difference between the approval they currently have to gain and having to go through a licensing process?

**Mr PRICE:** I am not an expert in the use of wastewater by food premises. I think the point that we were trying to get at is that more and more people are looking for other water sources to use in their processes and that if they were to use one of these water sources as part of their processes it should be appropriately vetted. There should be clear guidelines on whether or not that water is suitable for use for the particular purpose and that if there is an approval process they need to go through it should be something like through the food authority.

**Ms CARMEL TEBBUTT:** If I understand it correctly at the moment there is some process where they to gain prior approval from the food authority to use wastewater, but you are saying it is not an adequate process to properly assess whether the use of that wastewater is satisfactory. Is that right?

**Ms STALGIS:** No, that is not my understanding. I do not have an understanding of whether they do—

**Ms CARMEL TEBBUTT:** You do not think they need to get approval at all from the food authority to use wastewater?

**Ms STALGIS:** I think they should, but I am not aware if they are required to.

**Ms CARMEL TEBBUTT:** I might be reading the submission wrongly. It is probably something we can check with the food authority when they come.

**Mr THOMAS GEORGE:** We have heard time and time again today that councils are under-resourced in terms of support for onsite sewage management systems [OSMS]. What are your comments in relation to that in terms of resources that are provided by councils, seeing you have not got any oysters?

**Ms STALGIS:** We are definitely under-resourced. I have two officers, two effective positions, so one full time and two part-time officers who undertake onsite sewage management duties. And I have five other officers plus myself who do perhaps 5 to 10 per cent onsite sewage management. All that we are getting through are development application referrals, applications to install, when people lodge an application for a new system, and complaints. Unfortunately we are doing all reactive work and no proactive or routine inspection type work. We are significantly under-resourced.

**Mr THOMAS GEORGE:** Do you want to comment on that?

**Mr PRICE:** We have one full-time officer and one trainee officer in our program. With the 4,700 systems a large number of them are aerated systems. Those systems submit to us their servicing sheets on a quarterly basis. That system alone, to check the servicing agent sheets, check whether there are problems and go out, is a major task for us. We have the approvals coming in as well. I can honestly say we have never been ahead on the inspection regime and it is probably the other way around, which is why we have had to streamline and target our inspection program to where we think the greatest risk would be if there were failures.



**Mr THOMAS GEORGE:** Are you aware of any council away from the coast that you believe is resourced?

**Mr PRICE:** We are part of an on-site wastewater working group and I am not aware of anyone ahead of the game.

**CHAIR:** The Committee to be cognisant that whatever comes out of this local government gets support. It is another impost. We can suggest all these grandiose ideas but we need to provide the means to deliver them as compared to another impost on local government.

**Mr JAMIE PARKER:** This is one of the difficulties. The Government submission says the regulation is fine, council is not committing the resources, if they are not committing the resources they can increase rates or charge inspection fees—so there is no problem, the problem lies with local government's lack of commitment. That is me paraphrasing the submission. I want to put that to one side; forget about costs and charging people. What are the problems with the regulatory process—putting aside extra costs—one thing we have heard is accrediting private service agents is an issue. Several witnesses have said that there is a lack of reliability in terms of the service agents. There is a concern that service agents are not delivering. Local government is duplicating that by going out and doing the job correctly because there are some agents not doing the right thing. Is the lack of a more rigorous accreditation process for service agents placing an additional burden on the council?

**Ms STALGIS:** Yes, to some extent. It has to be recognised that service agents service aerated wastewater systems [AWTS] which are 30-50 per cent of all systems. There are 50-70 per cent of systems that need council inspection. Often we talk with service agents. Some of them are good but they are competing, as the Farmers' Association said, with rogue operators. It often does present problems. Camden Council many years ago used to run a service agent business because we were concerned at the lack of service being provided by some service agents. We have since stopped that. We did not want to compete with private business but that was why the business was established in the first place. Yes, we are concerned and we would definitely support the accreditation of service agents but it has to be supported by baseline education and accredited training.

**Mr PRICE:** Yes, Penrith would hold a similar view. Service agents should be accredited and trained as part of that accreditation, and their accountability should be to a State body like fair trading.

**Mr JAMIE PARKER:** Like other tradespeople?

**Mr PRICE:** Yes. We do get our own do-it-yourself service people. We try and put them through a more rigorous degree of questioning on skills and abilities and what trades they might have to do their own systems. We have some service agents where the owners do not even know they have been to their property, yet we get service sheets for them. It is difficult for us to prove whether they have or have not done that. It is part of our system that if we do not get a suitable service sheet in we contact the owner and we tell the owner that we have not received a report. That gets back to the service agent. It is the owner's responsibility. It is not the service agent who is accountable for that approval; it is the owner's responsibility. We try to go through the owner and market forces would predict that they would go and get someone that does it properly for them. It is not always successful.

**CHAIR:** I have every faith in local government. Council are the experts. You know what you are looking for. Would it be too far afield for council to be the trainer, obviously being paid, of the service agents so you are training to best practice? Would that be something you would like to comment on?

**Ms STALGIS:** Quite often the service agents come out, they look at the tank, they look at the components of the tank, but they do not look at the irrigation field. As a council officer I do not have the expertise to train someone in the components of the tank. I think a third party, a nationally accredited course, with experts in wastewater would be more suitable than the majority of local government officers.

**Mr PRICE:** Similarly, we do not have the expertise in-house to do the servicing or train people to do the servicing. I understand that TAFE has tried to run courses and there have been other private educational institutions doing a similar thing. We send our officers to those courses to get a good appreciation of what they are doing. We are looking at performance based outcomes—disposal areas, distances to waterways, public health risk to the property owners and the neighbours—they are the management issues of the systems that we focus on.

**Ms CARMEL TEBBUTT:** I was going to ask about resourcing issues. It seems to come back to what resources are available and who pays. First of all, I was going to ask how do you resource your current inspection and monitoring regime? Do you have a levy on your rate notice, charge per inspection or is it covered under the general rate income? The second issue would be whether you think there would be support in your communities to increase the amount of funds you raise to cover a more rigorous inspection regime; for example, more staff with more opportunity to deal with the problems you have identified.

**Ms STALGIS:** Firstly, council issues approximately a \$60 fee on the rates annually to those premises without sewers. It must be seven years ago we placed that on the rates. Before we placed it on the rates we issued a generic approval to operate to all property owners as it is an offence not to have an approval to operate. We did not want the average ratepayer to be in breach of the law. We issued a generic approval to operate with several conditions on how they should operate their system. I do not think it would go down well in the community if we increased the rate from \$60. It was originally \$50 and has gone up with the consumer price index [CPI] each year. When we first levied it we received so many telephone calls that we had to set up a call centre. I do not think it would find favour.

**Ms CARMEL TEBBUTT:** Has it been accepted now, the current amount you charge?

**Ms STALGIS:** Yes, when rates notices go out we receive several calls a year but not as many as we did. We do often receive criticism because we are not doing the proactive inspections, yet they are still being levied.

**Mr PRICE:** The Penrith community would be sensitive to any increase in the fees they are already charged. When we first brought our strategy on line and introduced the fee the number of people ringing in with complaints about having to pay another fee was quite enormous. We charge an inspection and approval fee but some time ago when we were reviewing our previous strategy the council asked us to explore not charging aerated system owners a fee for inspections because they were being serviced by an external service agent. I cannot speak on behalf of the current council but I think they would look long and hard at any suggestion to increase anything.

One other point: No matter what charge is there we get a percentage of people who do not pay. That raises another issue of chasing those monies. At the moment we have to slightly subsidise our program. It is meant to be on a cost recovery basis but we cannot meet the cost of running that program without some subsidy.

**Ms CARMEL TEBBUTT:** Is that the same for Camden Council, you are not full cost recovery, there is some subsidy?

**Ms STALGIS:** When I last looked two or three years ago it was fairly close to balanced. I would suspect now that general revenue is supporting the program.

**Mrs TANYA DAVIES:** The silver book has been raised by almost everybody and the fact that it needs to be reviewed. Are you able to provide any specific areas or specific topics where the book should actually be reviewed or updated?

**Ms STALGIS:** I have a short list of areas. Firstly, table 5 on page 66, which is a table that lists buffer distances to sensitive areas—farm dams and water courses are listed—we would like to see a distance to market gardens and crops based around some science. The Food Authority or the Environment Protection Authority might be able to come up with a figure. That is lacking at present. The book needs to be updated in terminology. There is a difference in terminology between the Local Government Act, the regulations, the Australian standard and the silver book. It would be nice to see the relevant pieces of information aligned. There are several documents that deal with wastewater and it would be good to see that the silver book is the central document so we only need to go to one guideline or code of practice plus the Australian standard for the construction requirements.

We would like to see it more specific and direct, not vague as it currently is in some areas. An interesting side point is the silver book currently deals with up to 2,000 litres per day systems on page 9, which is approximately a 10-person system. That is a wastewater system in a domestic setting. Local government is now responsible for systems up to 2,500 equivalent population [EP]. Once the system goes over 2,500 people it falls to a scheduled premise by the Environment Protection Authority. There is a gap in guidelines between 10

people and 2,500 people. I do not think the silver book should address that. We suggest that legislative responsibility be returned to the Environment Protection Authority—that would be my suggestion.

As someone mentioned previously, the silver book gives guidance to calculating disposal fields. Whether an adjustment is needed in the silver book or in the Australian standard: when we used to receive wastewater reports from wastewater consultants we would receive varying sizes. If you had two properties side-by-side one would come back with a disposal field of 300 square metres and the neighbouring property's disposal field would be 1,400 square metres. Council has engaged a consultant so our ratepayers do not need to engage a wastewater consultant to do those calculations. It would be good to see in the guidelines exactly how the calculation should be undertaken and to have it written out step-by-step so there is no variation between wastewater consultants and those in local government. If we are not educated in how to assess those we cannot see where the faults are in that wastewater assessment. They are the few things we would like to see updated.

**Mr PRICE:** I would like to add that it is not clear just how far you should be from private drinking water supplies or water bores, so we tend to take the approach that it should be 100 metres or somewhere in that ballpark—with underground water tanks particularly. When you are building a house you should also be aware in a rural area that you are going to have some on-site requirements and not to position your water storage areas down slope of an on-site septic area. Technology has come a long way since the silver book was written. There are a number of other systems and technologies available that significantly bring down nutrient-bacterial loads. Those systems would obviously need to be in a more contemporary guideline.

I agree that between the silver book, the Australian standards, the EPA guidelines and NSW Health I understand are also involved in writing most of those documents—except the Australian standard. There are several different methods of calculating disposal areas—at least three or four that come to mind—and having a consistent approach based on different soil types in different areas. It gets very technical when they start looking at phosphorous levels in soils and 50-year life spans of disposal areas and the mobility of nitrogen, and the standard looks at hydrology and how much water can actually be held by particular soil types and penetration into groundwater. So there is a lot of science behind it and we need a guideline that helps the council when it is developing its own policies. We have had to develop a policy to also assist local landowners in our area so that they have one consistent document to follow, which we have based on those guidelines. We also have a system in place through our strategy where they do not have to go and get a waste water report if they can meet the buffer distances and the disposal area sizes that are in council's policy. We have had to do that because there was nothing else available for us. If they are going to review it, it should cover the areas I have spoken of previously plus the ones I just mentioned then.

**Mr THOMAS GEORGE:** Did you just mention a buffer area for water bores?

**Mr PRICE:** For bores and for underground water tanks, any water that might be used as either a drinking water supply or a stock water supply or for other purposes other than getting rid of wastewater. We do not want them contaminated with pathogens. We do not necessarily want other things like the salts and nutrients that are in wastewater also getting into those supplies. Some of our officers have rung up asking questions of other authorities as to how far an underground tank should be placed away from a system.

**Mr THOMAS GEORGE:** I am more interested in the buffer area for water bores. What would your buffer be?

**Mr PRICE:** Currently we have 40 metres or 100 metres from a waterway depending on what type of waterway it is. For environmental protection, in terms of the science of how much bacteria will get into one of those water sources, we do not know how far it needs to treat the pathogens and whether or not the seepage will get into the supplies. We know what affect it will have on the people drinking it, but we would like to clearly know how far we should be placing these things away from on-site systems.

**Mr THOMAS GEORGE:** It is pretty hard to dictate where you are going to put a bore. It is where the stream is that you put the bore. Say if the water stream is here and you put the bore down there, are you suggesting there would be a buffer and if there was a creek over here you would have to come back further?

**Mr PRICE:** A buffer from the wastewater disposal area and the system from wherever the bore is located to prevent any of that wastewater getting into it.

**Mr THOMAS GEORGE:** The wastewater is the buffer area from the bore?

**Mr PRICE:** That is right.

**CHAIR:** An overriding point is getting consistent guidelines or consistent documents from council to council. We could have two neighbouring councils with different guidelines because it is based on interpretation. That causes frustration that someone who has lived at Penrith could do it this way and then they move to Camden and they have to do it another way. Ms Stalgis raised a good point about the \$60 fee. One would think that it is probably revenue neutral now. It is quite funny—the wrong word—to think that people with these systems are being asked to contribute something and we have to educate those who think: Why should I have to pay \$60? It would have to be one of the most heavily subsidised things if you need a council staff member on site to do some work. An amount of \$60 is not going to be a call-out fee for a private person, let alone the hours, days or weeks that could be spent on something. It frustrates me that people think: Why do I have to pay a \$60 fee if no-one inspects. When one considers why it is there and, as Ms Stalgis has said, in Camden potentially two-thirds are non-compliant, they are getting it cheap at \$60. I thank you all for your time before the Committee today. The Committee may wish to send you some additional questions in writing, the replies to which will form part of your evidence and be made public. Are you happy to provide a written reply to any further questions?

**Mr PRICE:** Yes.

**Ms CHRISTIE:** Yes.

**Ms STALGIS:** Yes.

**(The witnesses withdrew)**

**ANTHONY PAUL ZAMMIT**, Manager, NSW Shellfish Program, NSW Food Authority, and

**ROBERT IAN MITCHELL**, Principal Project Officer, Water and Sewerage, Office of Water, sworn and examined:

**ROBERT JOSEPH BANENS**, Environmental Engineer, Team Leader, Assessments, Sydney Catchment Authority, and

**TIMOTHY MARK GIPPEL**, Senior Policy Officer, Fishing and Aquaculture, Department of Primary Industries, affirmed and examined:

**CHAIR:** I must draw your attention to the fact that your evidence is given under parliamentary privilege and you are protected from legal or administrative action that might otherwise result in relation to the information you provide. Any deliberate misleading of the Committee may constitute contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Before we commence with questions would each agency like to make a brief statement?

**Mr ZAMMIT:** I manage the NSW Shellfish Program. We run the quality-assurance program for the New South Wales oyster industry. My primary role, related to the work of this Committee, is the risk that on-site sewage management systems pose to shellfish production areas.

**Mr MITCHELL:** The New South Wales Office of Water, previously the Department of Land and Water Conservation, has an advisory role with NSW Health on the On-site Wastewater Advisory Committee.

**Mr BANENS:** The Sydney Catchment Authority was established sometime in 1999 as a result of the cryptosporidium incident. Therefore the Sydney Catchment Authority has particular interest in maintaining the quality of water for Sydney's drinking supplies and we have a number of Acts and statutory instruments that assist us in this regard. The most recent one, and the most relevant one in this particular case, is State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011, which provides a concurrence role for the State Environmental Protection Authority in relation to developments. It requires all developments to have and to demonstrate a neutral or beneficial effect on water quality. It provides for the use of the neutral or beneficial effect on water qualities or NORBE tool—you can ask me some questions about that later on—and it requires that all developments should incorporate current recommended practices in their activity.

**CHAIR:** Mr Gippel.

**Mr GIPPEL:** In relation to this Committee, Fisheries NSW manages the New South Wales oyster industry, which is the State's largest fishery valued at \$43 million farmgate value in 2009-10. There are some 329 permit holders growing oysters in 30 estuaries on some 2,830 hectares of lease. The other role that we have is that we are referred development applications from coastal councils where a development may impact on an oyster aquaculture area.

**CHAIR:** We have four agencies represented here so Committee members will ask questions and feel free to answer as you deem appropriate. The Committee received a whole-of-government response to this inquiry submitted by the Department of Premier and Cabinet. On page 1 the Department of Premier and Cabinet advises that the biggest risk in relation to OSMS mismanagement remains to the oyster industry. Who is responsible for water quality monitoring, what are the monitoring processes undertaken to identify water quality standards in water harvesting areas and what factors are considered when clarifying oyster harvest areas as either approved, restricted or prohibited?

**Mr ZAMMIT:** In terms of assessing the oyster harvest areas, it is a risk based assessment that is made in line with a national standard that we work under called the Australian Shellfish Quality Assurance Program. We largely follow that standard. There are a number of components to the standard. Initially we would undertake what we call a shoreline survey, which means we walk, boat, drive around the entire catchment and we map out all the potential pollution sources that may impact on the particular harvest area being assessed. We then put in place a monitoring program, which includes faecal coli forms in water and E. coli in shellfish. That monitoring will occur generally about a two-year period.

We collect around 40 rounds of samples from the area. At the end of that the data from that monitoring program gets combined with data from a number of sources. With regards to the OSMS we approach the local government authority, the council in the area, and we ask them for information on the performance of the OSMS in the area and the type of questions we ask: is their inspection program up to date, are there any systems with outstanding work orders or any systems that are non-compliant that are in close proximity to the harvest area. There is a sanitary survey report completed on the sanitary status of the harvest area that is compared to the standards that are provided within the Australian Shellfish Quality Assurance Program and a classification is assigned.

**CHAIR:** The Department of Premier and Cabinet noted that risk mitigation strategies are employed, including temporarily closing the affected area for the commercial harvest. We have received many submissions from councils, and you have been in the audience and heard themselves, of oyster farmers in which they note the extended closure of oyster harvest areas such as near the Kalang and Hastings Rivers. Could you please advise what processes take place when an oyster harvest area is closed, for how long do the affected areas usually remain closed and are you aware which oyster harvest areas currently remain closed?

**Mr ZAMMIT:** There are short-term and long-term closures, so I will start with the Hastings River. The Hastings River has not been under long-term closure due to microbiological problems that I am aware of. Each area is classified, as part of the outcome of the study a management plan is put in place and that has closure figures. When we have rainfall you get freshwater run-off. The run-off tends to bring contaminants from the land. That is something that cannot be helped. As part of each study we work out how much rainfall, what environmental parameters are required in that catchment to result in contamination of the harvest area above the standards that are set in the Australian Shellfish Quality Assurance Program.

For the Hastings River, when they have rainfall above a certain level it will close. They will then wait for salinity in the river to come back to the level that is determined for each harvest area. Once the salinity is back to that level they will then conduct a round of sampling to verify that any contamination has cleared from there and it will be opened. They have five harvest areas, four close to the entrance and one upstream; the one upstream tends to be closed longer, which makes sense because it takes a lot longer for the saltwater to get back up there. For the other areas they would be closed for usually within about four to 10 days, depending on the level of rainfall.

With the recent floods obviously it is going to take longer for the rainwater to clear. The Kalang River has been closed since July 2008. It was closed in response to an outbreak of norovirus. It was actually two cohorts of illness reported from two different restaurants that were linked to shellfish from the Kalang River harvest area. Follow-up investigations of the harvest area did detect norovirus in shellfish collected directly from the harvest area. In response to that there was an interagency working group set up to investigate the problem and establish the extent of the problem and ultimately put in place solutions to remediate any issues that were identified. That process is still underway. A number of issues were identified and a lot of the issues were linked back to OSMS-type systems.

**Mr JAMIE PARKER:** Thank you very much for taking the time to come along. We appreciate your expertise and input. I have two questions: the first one is in the whole-of-government response on page 4 as follows:

There is no standardised process for the inspection of OSMS or common knowledge on how to identify an OSMS failure. As such, inspection and maintenance of OSMS varies widely, and is not always effective.

It is obvious that there is a difficulty or a process that can be improved. I am not sure which agency identified this as an issue. If there is an organisation identified as an issue, how is that proposing to be improved, considering that the quote I just read out is something that obviously needs to be addressed?

**Mr BANENS:** I am not quite certain that it entirely reflects what was in our original submission, which was then put in a whole-of-government, but we see failure on on-site waste water systems or OSMS, whatever it is as I do not use that acronym. We see that as being at a number of levels, part of it being design, part of it being installation and part of it being maintenance and compliance inspections. It is in a number of areas. Yes, there is a lack of standards and lack of application in that area in particular in relation to compliance and inspections.

**Mr JAMIE PARKER:** I notice it says:

The Sydney Catchment Authority ... is currently developing a guide on the identification and assessment of failure of on-site wastewater systems, using a risk assessment process. It is envisaged that the guide will assist council personnel inspecting systems in the drinking water catchment.

I think someone else also mentioned—if I can paraphrase—that everyone was so frustrated that the Sydney Catchment Authority [SCA] just said, "Well, just go and do one". Am I being too harsh?

**Mr BANENS:** No, you are not. The Sydney Catchment Authority's principal role is to supply rural water and it is to protect our catchments. We would be very happy to use existing guides where they are available and where they are appropriate and cover all the issues. What we discover is that they sometimes are in conflict or sometimes they are unclear or sometimes they do not cover the areas that we want them to cover. For example, in relation to the inspections and compliance we are developing a guide right now. We have developed a number of other guides that assist other areas where we see a gap in the information that is available to installers, to councils or designers. One of the things I have here is a system called "Designing and Installing On-site Wastewater Systems".

It is something that just very recently has been completed and it is to fill a gap in between high-level design and the installation where we want to make sure that whoever designs a system designs it and takes responsibility for the design; whoever installs it, installs it and takes responsibility for the installation. It provides a lot of technical details in here and provides mechanisms whereby there is sign-off at a number of levels. It also provides a number of checklists for installers, council inspectors and owners to ensure that their system is not only correctly installed but also correctly maintained and inspected.

**Mr JAMIE PARKER:** That sounds like that may address some of the issues that have been raised during these hearings. What is the name of that document?

**Mr BANENS:** "Designing and Installing On-site Wastewater Systems". Unfortunately, it is in a pre-publication form. It will be available on our website but it has tended to be a handbook that people take with them in the field. Clearly when you are out installing a system or whatever else you are not going to be accessing the internet to get access to it, so it will have tabs. It will enable you to identify the various treatment systems, the various tanks and the relevant disposal systems. It is very much fitting in between this little book and the Australian standard and it addresses this whole bit about ensuring correct installation because observations have been that many systems that have been installed or are being installed fail virtually from the day they were installed because they have been incorrectly designed or incorrectly installed and that was the reason why we thought we would provide guidance. I would be happy to tabulate this.

**Mr JAMIE PARKER:** We have the silver book, we have the recently published Australian and New Zealand standards and we have the guideline document produced by the Sydney Catchment Authority. Is that the document referred to in the submission:

The Sydney Catchment Authority ... is currently developing a guide on the identification and assessment of failure of on-site wastewater systems ...

Is that that document?

**Mr BANENS:** No, that is a different document.

**Mr JAMIE PARKER:** Can you tell me about this other document and how that will fit into the silver book and the standard?

**Mr BANENS:** In our catchment area, which is 16,000 square kilometres, we have over 15,000 on-site wastewater systems managed through a range of councils. Eurobodalla is a little tiny sliver in our catchment but we have major councils such as Wingecarribee, Goulburn, Lithgow, Wollondilly, Palerang, Upper Lachlan; those are the main councils in our areas. I think it would be fair to say that compliance inspections with councils are highly variable. Where you have good inspections is often the result of one key individual being interested and taking the responsibility but in many other cases it is probably less than desired. Part of the problem is lack of commitment but part of the problem also is not having the right information so that when councils do their inspections and we have funded them to undertake their initial set of inspections and assessments they often come back with quite variable results because there is no single standard by which they can judge and assess systems. We are trying with this other document to provide a clear guide for councils in our areas—a lot of stuff is relevant in many other areas as well—and to assist them in providing a consistent assessment of systems.

**Mr JAMIE PARKER:** Does that document have a name yet?

**Mr BANENS:** No.

**Mr JAMIE PARKER:** We are not quite sure what it is but we know what it will do?

**Mr BANENS:** It is a range of things that we have developed for on-site wastewater management, so it is one of a number. It is one of the ones on the drawing board.

**Mr JAMIE PARKER:** What is your expectation in terms of when that or the draft will be completed?

**Mr BANENS:** There was going to be a meeting today to start progressing it further; we have already had a number of meetings, but the meeting has been postponed, but we will do that within the year.

**Mr JAMIE PARKER:** Months or years?

**Mr BANENS:** No, it will be within the year. It takes time because we deal with assessments of developments in our catchment area. There are about 500 a year, ranging from power stations to sewage treatment plants to domestic on-site wastewater systems. It is an ancillary thing that we do but it will be done within the year.

**CHAIR:** For clarification, we are very happy to use these for our reference. Did you say that you would like these tabled. These have not been published yet, have they?

**Mr BANENS:** They have been approved for publication and you can table them quite happily.

**Designing and Installing On-site Waterway Systems and Sydney Catchment Authority Current Recommended Practice tabled.**

**Ms CARMEL TEBBUTT:** The issue I want to come back to is what you said, Mr Banens, about the compliance and inspection regime being variable across councils. We have heard from a number of councils that some of them have very good systems, but they have also identified that it is variable. What, in your view, is needed to try and ensure that there is a more uniform and satisfactory standard across councils, because certainly from the council's perspective what they are saying is that they would like greater involvement from the State Government—and I assume they mean State government agencies? The other issue—and I am not quite sure who may want to comment on this—is the role of the service agents, and again there has been quite a strong representation from the councils to have service agents accredited in some way, through Fair Trading or some other government agency. Do you have a view as to how effective that would be and is there going to be a cumbersome process that has some costs as well as some benefits?

**Mr BANENS:** I am not sure that I can add a great deal to what the council people have presented earlier. Their comments are absolutely correct: they have got competition for funding and it is very hard to get people to pay for something that they have paid for in the first place to install it and then have to pay a regular fee, and if they have an aerated waste water treatment system they have their quarterly inspections and in addition to that they have to have the council inspections which they have to pay for. It is a difficult exercise and I am not sure I can add a great deal. But I can add the observation that there is a highly variable standard in terms of inspections of aerated wastewater treatment systems. We are not a council, we do not see them as much as councils do, but where they impact on on-site systems—and we have between 120 and 140 on-site wastewater systems—we have noticed with a number of those that we had abject failure of our systems and we had no idea, yet they were being happily ticked off by—

**Ms CARMEL TEBBUTT:** By the service agent?

**Mr BANENS:** Yes.

**Ms CARMEL TEBBUTT:** The idea of accrediting service agents, would that be something that might help address that? Does anyone have a view on that?



**Mr BANENS:** I think there is a benefit in accrediting them, but in the end you will probably get rogue operators regardless of accreditation. It is a competitive business; it is a low-money business. I think Joe Whitehead might have mentioned it is not big dollars here, so if they can shave off a few dollars to make themselves more competitive and thereby just sit in the car and replace the chlorine tablets and tick a few boxes that is it. There is a problem also, which was mentioned, I think, by Camden, that often the inspection is just of the tank. An on-site wastewater management system involves the treatment system and the disposal system and they both need to be inspected. So the inspection for aerated wastewater treatment systems is focused on tanks.

**Mr THOMAS GEORGE:** Further to that, in terms of licensing or registering the service agents, we will always get rogues but at least if they are licensed or approved you have got a lot more control than what we have got now.

**Mr BANENS:** I would agree with that.

**Mr THOMAS GEORGE:** I believe we would still always have rogues, it does not matter what we have.

**Mr BANENS:** It is interesting the concept of getting them accredited and having some sort of formalised training. You would still need to undertake regular audits of their performance otherwise you would never know if things are working well or not.

**Mr THOMAS GEORGE:** Further to that, we had a rogue operator at home that was going around emptying septic tanks and going down the road and dumping it. At least you can control it right to the end too. That is another advantage of having them under some form of control.

**Mr BANENS:** If I could follow on a little bit. One of the things is that we talk about inspections by service agents for aerated wastewater treatment systems. They are the only ones that are currently being regularly inspected. Septic tanks typically have a design life of five years or even less before they have to be desludged—and there may be other things as well—and a lot of that is never done.

**Mr THOMAS GEORGE:** While we are talking about septic tanks and these operators, another issue in country and regional areas is that some of the councils refuse to accept these tankers unloading in their council area, and they have got to drive to one or two councils away—councils will not accept them into their own septic system. That is a further issue.

**Ms CARMEL TEBBUTT:** I had another question which is probably for the Food Authority but I am not sure if it fits within your area of responsibility so you might have to take it on notice. We were trying to get an understanding of the use of wastewater in food premises and whether the Food Authority had to provide approval for wastewater to be used in food premises and how rigorous the process of approval is and whether there is any ongoing monitoring.

**Mr ZAMMIT:** I will give you a short answer. There are some food premises, but they generally tend to be larger factories that have approval to use recycled water. I am not sure whether it is particularly from OSMS or not, but they tend to be fairly large systems and they will have approval, say, to use recycled water in refrigeration systems or for hosing down outdoor areas, but they have to remove the solids and then address the microbiological concerns. Generally, food legislation is outcome-based, so every food manufacturer has a responsibility to produce safe food, and if councils have any concerns that food is becoming contaminated then that is when the Food Authority, as the regulator, can step in and take action.

**Ms CARMEL TEBBUTT:** I think the example that was used, nonetheless, if I understand it correctly, is that the Act refers to cut food and they are saying that the problems arise before the food is cut and therefore it is not subject to the kind of rigorous oversight that it should be. We are going to put some questions on notice and this might be a question that we could put on notice and try and get some more information.

**Mr ZAMMIT:** If it applies to food for sale I think we will have to take that on notice; it depends at what point it is considered food for sale.

**Mrs TANYA DAVIES:** Just a question in terms of your submission and also other submissions about the difficulty in ensuring reporting of pollution incidents takes place. What changes could be made to the current

system to try and encourage greater reporting or more transparency in that situation where there is a problem and in trying to deal with the problem before it develops into a more serious issue?

**Mr ZAMMIT:** I think Malcolm touched on it when he talked about standardised reporting back to the council, especially of the service operators or even when councils go and conduct inspections, the inspection forms that they use. We do deal with a number of councils along the coast and request information from various councils and I notice that there is a lot of variability in the level of information that we get back. Generally, councils will only report to us on an aggregated basis because they are concerned about privacy issues. But even outside of that scope the level of information we get on whether or not the systems are performing within a certain—we might talk about a group of 10 or 15 houses, it is quite varied. I think some standardisation both at the operator level and also at the council inspection level, whether it is looking at the IT systems and databases that they use and making sure that the fields are common, not having a base standard.

I think it is better saying that the councils that are here and that are involved are the ones that are interested, so you are going to see the councils that have applied the most resources to it and have addressed the problems, whereas the councils where I see the health office struggling to get traction and to get support within a council, they are the councils that are not going to be represented here but are the ones where we need to encourage them to take the issue on board and apply more resources to it.

**Mr THOMAS GEORGE:** It has been very evident today that the councils in particular are looking for guidance or support from the Government in having a whole-of-government approach to a code of practice or a rewriting of the Silver Book. Do you see any reason why that cannot happen? I know you cannot speak for all councils.

**Mr BANENS:** I cannot speak for all agencies. While it would be desirable to have a whole-of-government approach to some extent we have quite different requirements in the Sydney drinking water catchment and therefore we take bits and pieces of the Australian standard and the Silver Book and our own requirements, which we then apply in our areas. The key test for us is the neutral or beneficial effect on the water quality test, and that means any pollutants—that is, in wastewater—nutrients or pathogens cannot leave the site or cannot enter a stream. We are quite rigorous in the protection of Sydney's water quality and that is why to some extent it is unusual: here we are we are probably at the cutting edge of wastewater management and we have quite different requirements. We try and adapt as much as possible existing standards and guidelines where they are available, but we have created another document which is Development in Sydney's Drinking Water Catchments—Water Quality Information Requirements. It deals not just with wastewater but with a whole range of development matters. But it is quite specific about saying where you use the Australian standard, where you use the Silver Book, where you apply the Sydney Catchment Authority requirements as well in that area.

We try to be very prescriptive here because we find that the design of wastewater systems is very variable—very good to extremely poor—and the installation of those, again, is very good to very poor. So we try to make sure that we raise the bar in our drinking water catchment areas, and we are providing a range of guidelines and tools. I will mention this now, and you can ask me later on which is the wastewater effluent model. We actually model landscape features—that is, slope, permeability, the phosphorus absorption characteristics of the soil, the chemical characteristics of the effluent. We model that and that is part of our neutral or beneficial effect on the water quality test. So we apply that. It is a tool which probably has application anywhere in New South Wales, anywhere in the world because there is nothing else like it. So we have developed that tool, again, to help councils.

I might make an observation. To some extent our catchment councils have become a bit reliant on the Sydney Catchment Management Authority; we provide them with funding, we provide them with technical expertise, we provide them with guidelines, but we are now trying to push the tool back onto councils so that they can undertake a proper assessment process in regard to on-site wastewater systems.

**Mr THOMAS GEORGE:** So you are really enforcing the one size will not fit all?

**Mr BANENS:** We are certainly not enforcing one size fits all. We are very prescriptive but we say this is the approach you must take; there is a range of options available to you. I think someone mentioned an example where you might have a very large effluent irrigation area. The option might be to go for a different disposal system—it might be an absorption bed rather than an irrigation area. So, therefore, there are alternatives that are available. But all we are trying to make sure is that we have a consistent approach, so we provide some

standards. The guidelines that we take from the Australian standard and from the Silver Book and our own, we put them together into this single requirement document that is available to the councils and to consultants.

**CHAIR:** Something I have picked up, and I am very happy to take it on notice and it may even form part of any questions that we send you, just to be devil's advocate, and not to put you gentlemen on the spot, obviously, councils today and in their submissions have brought up their frustrations with dealing with government agencies. Obviously there are two sides to every story and there is somewhere in between. I notice Mr Zammit is nodding—I am not sure if he is nodding in agreement or not nodding in agreement. This may be a rhetorical question but do you see that there has been a culture of council and agencies struggling to communicate? Is that something we need to address or am I asking the wrong people? It is only that it has been brought up today and it has been brought up in the submissions that, a bit like you have just said, Mr Banens, you are throwing back: councils are bringing in an education process and they are finding they are not getting responses. Should they be looking for responses elsewhere or is it agencies—

**Mr BANENS:** I think in our catchment area they definitely look to the Sydney Catchment Authority. Do we provide training? Yes we do; we train council staff in the assessment process and we train consultants in the assessment process. So that book you have got in front of you we have already provided some preliminary training on an earlier version of that. So we provide a lot of training to councils; we provide financial support to councils. We are really keen to get them to do the job well and we want to encourage them. We are not going to be funding them indefinitely but we want to get them past first base and then hopefully they will develop some momentum within the organisation to continue looking at wastewater systems seriously.

**Mr ZAMMIT:** I want to speak about the shellfish program in terms of the councils that have oyster harvest areas. There are many systems surrounding oyster harvest areas and we have made a conscious effort over the past five years or more to have direct regular contact with the officers on the ground. Our officers who are doing the assessments try to get to know the officers that are doing the on-site sewerage management system inspections on a personal basis to facilitate the exchange of information. We require the information for our assessments and we also try to provide technical advice about the appropriate level of treatment that we would expect given each system's location or proximity to the shellfish harvest areas. The reason I was nodding is that where we have made that effort and improved the lines of communication there have been benefits to both organisations. We have also had the oyster industry come in and form a tripartite group where we are all interested and we are all supporting each other. Where councils are trying to get people who have septic systems to upgrade them because they are not performing, they also have the oyster farmers as their local constituents saying, "Yes, we support these actions because we require good water quality for our businesses." If these systems are not performing and there is an outbreak they will be out of business, and that affects jobs in the local area and impacts on the community. I think that has been quite a productive relationship. I know most of the officers quite well because of that.

**Mrs TANYA DAVIES:** Mr Banens, you held up a document. Could you repeat the name of the document?

**Mr BANENS:** It is "Developments in Sydney's Drinking Water Catchment—Water Quality Information Requirements". I am happy to table that.

**Mrs TANYA DAVIES:** You said that you are very prescriptive in that document. You said you have taken elements from the silver book and elements from the Australian-New Zealand Standard and other areas of legislation and regulation. You said it needs to apply certain standards for different situations. I am curious as to how old the book is and how widely it has been disseminated because we have heard evidence today that people think there are many different avenues for getting information and they want something consistent. Are you saying this is the consistent effort?

**Mr BANENS:** That is for the Sydney drinking water catchment, so all the councils in the catchments. That is part of a clause of a development control plan of a number of councils, so when people want to put in an on-site wastewater system they are referred to that document to assist them in getting the correct information. The other issue is that one of the things we require a council to do is to undertake a mutual or beneficial effect on water quality analysis, our NORBE analysis, and part of that analysis involves wastewater modelling of the system on the site, given the slope, soil, buffer distances and other constraints. If the correct information is not provided in the wastewater report councils cannot model that. It is another means of clarifying the information. The wastewater model requires a lot of that. The model also has a bit of checking at the front end to make sure the information that is provided is consistent with the requirements of the water quality information document,

the Australian Standard and the silver book, as appropriate. Then it models and shows you how far the plume that comes from any wastewater system travels, where it travels and how it travels.

**Mrs TANYA DAVIES:** This booklet is to get a particular outcome for drinking water. Water that would perhaps be used for market gardens or other industries does not need to meet that level of standard. Is that assumption correct?

**Mr BANENS:** It is very much for a treatment and disposal system, not for a reuse system. We are very particular about applying NSW Health requirements for untreated or non-disinfected effluent to be discharged 300 millimetres underneath the soil, minimum depth, so we apply that for septic tanks, absorption trenches and any other system that does not involve a disinfection process. For systems that involve disinfection, such as, aerated wastewater treatment systems that generally have chlorine as a disinfectant process, depending on the rainfall or the density of population in an area we may or may not allow surface irrigation. Often we require subsurface irrigation because even though the effluent may be disinfected by chlorine the critical pathogen, which for us is cryptosporidium, is not affected by chlorine; it bypasses that. From a health point of view that is a key issue for us. Cryptosporidium is not rife throughout the community but if someone is infected with cryptosporidium that effluent will be contaminated and chlorine will not assist in disinfecting and killing that pathogen.

**CHAIR:** I direct that the document from the Sydney Catchment Authority "Developments in Sydney's Drinking Water Catchment—Water Quality Information Requirements" be attached to the evidence of the witness to form part of the evidence.

**Document authorised to be printed.**

The Committee may wish to send you some additional questions in writing the replies to which will form part of your evidence and be made public. Are you happy to provide a written reply to any further questions?

**The Witnesses:** Yes.

**(The witnesses withdrew)**

**VAUGHAN MACDONALD**, Leader Development, Division of Local Government, Department of Premier and Cabinet, sworn and examined, and

**ALISON WHITE**, Director, Metropolitan Water Directorate, Department of Finance and Services, affirmed and examined:

**CHAIR:** Before we proceed, do you have any questions concerning the procedural information sent to you in relation to witnesses and the hearing process?

**The Witnesses:** No.

**CHAIR:** I draw your attention to the fact your evidence is given under parliamentary privilege and you are protected from legal or administrative action that might otherwise result in relation to the information you provide. Any deliberate misleading of the Committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Would you like to make a brief opening statement?

**Ms WHITE:** Yes, thank you. The Metropolitan Water Directorate leads a whole-of-government approach to water planning for Greater Sydney and now the Lower Hunter. The Department of Finance and Services' role also includes providing advice to the Minister for Finance and Services in policy related to water industry competition and water recycling, with a focus on metropolitan regions. In that capacity the Metropolitan Water Directorate is currently leading the five-year statutory review of the Water Industry Competition Act 2006, known to all of us as the WIC Act. The review is being undertaken in consultation with other State agencies and key stakeholders, including the Independent Pricing and Regulatory Tribunal [IPART], which regulates licensing under the Water Industry Competition Act, government agencies, local councils and the Water Industry Competition Act licensees themselves.

The Act commenced in 2008 and aims to encourage competition in the supply of water and wastewater services and also to facilitate recycling in New South Wales. The Act's licensing regime applies only to private sector corporations operating and/or supplying retail water, wastewater or recycling services. It specifically exempts public water utilities, including local councils, and importantly it does not apply to single households or dual occupancy dwellings. The aim of the review we are currently undertaking is to determine whether the policy objectives of the legislation are being met. As part of the five-year statutory review it has become apparent that there are cross-sectoral issues between the Water Industry Competition Act and the broader regulatory framework for recycling in New South Wales, in particular provisions under section 60 and section 68 of the Local Government Act 1993. These are the same sections of the Local Government Act that regulate council-owned water and wastewater systems and privately owned on-site sewerage systems.

Although the Minister for Finance and Services is only responsible for the Water Industry Competition Act, these cross-sectoral issues mean that we are appropriately considering the broader recycling regulatory framework in New South Wales as part of this review we are currently undertaking. Stakeholder consultation has already been undertaken as part of the review to help us to form an issues paper. Many of the issues revealed in that stakeholder consultation have also come up in the submissions to this particular inquiry. Those issues raised by stakeholders are those that we detailed in the Government submission to this inquiry.

**Mr MACDONALD:** The Division of Local Government is responsible for the oversight of local councils in New South Wales. We set the policy and administrative framework on behalf of the Minister for Local Government. I am now the leader of Development and we are looking at programs that are whole sector programs to assist councils.

To put it into context for the committee, when the changes to the Act and regulations happened in 1998, the Government at the time introduced the Septic Safe program. That program provided funding of over \$4 million through that period. It was a capacity-building program aimed at providing councils with direct funding to assist them with the development of their on-site sewage management strategies. That was the predominant use of that funding but it was also used to fund research around waste water management, particularly on-site sewage management, because there was a need for that. The program provided funding to assist with the development of the strategies on a council-by-council basis. It also funded the provision of technical advice. At the time when the Act and regulations were changed, funding options were provided to councils to assist them to manage this activity. The aim of that program was to build the capacity of local government to take on the regulatory activity and to provide councils with funding options for them to offer to

their community. Ultimately, with an on-site sewage management system, the individual landowner is responsible for that system. The landowner is required to have approval from the council and the Act provides that councils can levy an approval fee, a fee for an inspection and they can also decide to contribute part of their general revenue to supporting this activity. That program was set up and funded through that period which also funded staff within the Division to provide this support. The funding for that finished around 2004. The Division continued to have a role in supporting councils, predominantly around the review of the Environmental Health Protection Guidelines, or the silver book as it is known. That commenced around 2003 and we carried that through. It is a technical guideline and our Division does not have the technical expertise to write that guideline. To do that we formed a cross-agency committee that had some of the experts from whom you have just been hearing, as part of that committee. It was across five or six agencies. A draft was developed that got close to a final draft in 2007. We were unable to get agreement on some of the technical issues at that time. Unfortunately the Division of Local Government has not been able to get it back on to its agenda because we do not have the resources to finish off that review.

As far as the Division goes, the most recent support program was the Integrated Planning and Reporting Reform which aimed to get councils to plan for the longer term by having a community strategic plan and a delivery program for the term of the council. That provides an opportunity for councils to identify objectives for their communities. A lot of councils are identifying a healthy environment and healthy and safe waterways in that. So the challenge is for councils to then decide, with their delivery program, that they want to regulate their on-site sewage management activities. Some councils do that and have a good revenue source to fund it. However, other councils do not see it as a high priority and therefore it does not get the same resources put towards it. That is the challenge as we roll this out across the State and provide the resources that are required to do an effective job of regulating on-site sewage systems.

**CHAIR:** The first question I was going to ask—without going over the history of the silver book because I had never heard of it before this inquiry and now I can quote fair bits of it—you said that there was a review done in 2007 and it stalled. Does the Department of Premier and Cabinet [DPC] envisage a review of the silver book? Because there is a common denominator here, that every submission that we have received—whether from local government, private experts, university professors or industry experts—has said that everybody is relying on this silver book but that it is not up to scratch. Is there a review, or will you be looking at a review or bringing back the 2007 review? At what stage is it?

**Mr MACDONALD:** It is not on our work agenda at this time but the Committee has raised the profile of the issue and it would be good to get it out there. It is not going to fix the issues. This is a guideline issued under section 23A of the Local Government Act that requires that councils consider the guideline. It is not a mandatory guideline, it is regulation of on-site sewage management and it is performance-based. So yes, we need to get a new guideline out. We need to work out how it fits with the new Australian Standard and with some of the recent Sydney Catchment Authority work that has been done so that we are not duplicating that work. We then need to provide an update to councils. It would be nice to get that done. It is a matter for us, as the Division of Local Government, to get that on to our list of priorities. We have a full agenda this year, with the Destination 2036 project that you may be aware of and the review of local government that was announced earlier this week. So that is some context.

**CHAIR:** Many of the submission-makers have stated that the guidelines would be more useful if they were enforceable and you have just said the same thing. Do you feel that it would assist councils if the guidelines were made to be enforceable?

**Mr MACDONALD:** I do not think making them enforceable is going to fix any of the issues because, at the end of the day, you have to have the people on the ground doing inspections and monitoring and regulating this activity. There are councils that do have an on-site sewage management strategy that sets out how they are going to manage this activity. Some councils have their own design guidelines. Those councils embraced this activity, it was a priority for them and they have developed a system to manage it. So the guidelines will assist but it is difficult to prescribe, within the guidelines, to suit the variety of environments that we have across New South Wales, which is why the Act has a performance-based approach.

**Ms CARMEL TEBBUTT:** The Committee has had a number of councils that have presented and some of them do have very good systems and have gone to a lot of trouble to improve the management of on-site sewage systems. Given that, what in your view is needed to ensure that all councils that have this area of responsibility manage it to a satisfactory level, so that we can be confident that effluent is not getting into the water streams and is not having an impact on food safety?

**Mr MACDONALD:** The main thing is, it comes back to resources. It comes to councils putting the funding aside to set up an on-site sewage management regulatory program. In some council areas that have 4, 5 or 6 thousand systems, you would need two, three or four staff to do that. A lot of councils, such as Great Lakes with 4,000 systems, has a couple of staff and it is not enough to do the whole job. So I suppose it comes back to a question of whether the Government wants to require that councils impose a fee on everyone who has one of these systems?

**Ms CARMEL TEBBUTT:** At the moment, Government does, it expects councils will do the right thing with the parameters or guidelines through this silver book.

**Mr MACDONALD:** Yes.

**Ms CARMEL TEBBUTT:** The issue of accreditation of service agents has come up—the people who go and maintain the aerated systems. Do you have a view on that or is it outside your area?

**Mr MACDONALD:** It is not directly in my area, however I do hear that issue regularly from councils. The accreditation system is under the Ministry of Health. It is its responsibility to accredit the systems and as part of the approval for those systems, they need to be inspected by a service agent every quarter. An approach was taken by the Hunter Group that the Committee heard from earlier today. There was a provision within that approval system to have a condition that requires that the agent is acceptable to the council. The council can set up an acceptable list of service agents and they can set a minimum standard. The Hunter Group did this on a regional basis back in 2004 or 2005. The Hunter Group set up a regional approach and we identified that as a good way of approaching this issue. However, it seems that there is variability in the effectiveness of the use of the list of service agents. For it to be effective, it requires the resources and the commitment of all those councils to keep the list up to date and to use it and to have effective approval conditions in place for all systems in their areas. That is an approach that I have seen and that has been our response when we have received queries from other councils. We tell them to go and have a talk to the Hunter Group because they have done some good stuff in this area.

**Mr JAMIE PARKER:** It is tricky, because we would not expect local government to run the compliance for carpenters, builders, plumbers, doctors or nurses but we are asking them to run compliance for this level of work. So I guess that is a challenge that we have to try and address. I wanted to ask two questions. First of all, when it comes to the resourcing, it is a real challenge and we all know it. All of us here have had some involvement with local government. The analogy that I draw is the one of the NSW Food Authority. For a long time the State Government knew that local councils should be doing the food inspections of their local premises to make sure that food quality standards were enforced. We know that it was patchy and was not done as well as it could have been. The State Government stepped in and said: Local government is required to inspect this many properties—that is the benchmark we expect you to meet. Then everyone increased fees and charges and got the revenue because it became a priority. That is one model. The other is the model we have at the moment where, when there is an interest and they are motivated, Councils engage in that. I wanted to ask about the issue of maintenance of the register of all the on-site management systems. Is that register up to date and is it a database that is effective? Is that something you could comment on?

**Mr MACDONALD:** It is a register within each local council area.

**Mr JAMIE PARKER:** So there is no transparency throughout New South Wales?

**Mr MACDONALD:** No, there is not a Statewide register, it is a council-by-council register for any approvals under the Local Government Act. Councils keep a register of those approvals. It is a recommended practice that they have a register. Exactly what details they keep in it, there is advice on what that should be but it is a council-by-council register.

**Mr JAMIE PARKER:** I ask a question about the famous silver book. You mentioned that the reason why the review stalled five years or so ago was that there were some technical disagreements or some technical issues. You do not need to go into the detail, but was that about the philosophical approach of the silver book or was the issue about distances or buffer zones?

**Mr MACDONALD:** Yes, buffer zones and loadings that are used in the calculations. There are different approaches to that, different views. It comes down to how conservative you want to be within those

guidelines, given that they are Government guidelines. I suppose that was the challenge, getting the agencies to come to an agreed position because, especially at that time, the research and tracking of effluent is difficult, so you have to build in some conservatism.

**Mr JAMIE PARKER:** What do you think you would do differently today to resolve that situation, because otherwise you would just have five people sitting around the table saying they do not agree with each other. Would the Sydney Catchment Authority [SCA] guidelines or the new standard help resolve that issue?

**Mr MACDONALD:** I would like to think so. Sydney Catchment Authority has been resourced to deal well with this issue. They have done and produced some very good documentation. We look to them in the work or the advice that we prepare. I would like to think it would enable us to get a reasonably quick resolution to some of those issues.

**Mr JAMIE PARKER:** Thank you for outlining the issues which are important to the directorate. In terms of the review that you are going through at the moment, what involvement do you bring to bear in terms of onsite management and are you envisaging this review will come up with any recommendations about the issue we are dealing with in the Committee?

**Ms WHITE:** No, the review specifically does not deal with single household or dual occupancy dwellings so we will not be coming up with any recommendations which are largely to do with the business of this inquiry. But we are looking at the nexus between the Local Government Act section 60 and 68 and the Water Industry Competition Act. Some of the areas that came up in the stakeholder consultation which I mentioned earlier are around distinguishing between sewage disposal and recycling. Our review is around recycling, but proponents and regulators alike have expressed some confusion about being able to distinguish between sewage treatment systems and recycling systems. That is particularly so in the context used in agriculture because domestic wastewater systems sometimes have an irrigation component. Depending on how they have categorised it, it then will lead you down a particular guideline route. It is important for those definitions to be clear, for people to understand which guidelines apply to them and for regulators to be able to clarify for proponents what kind of system that they are seeking to licence.

Another issue that is going to be interesting for us in our review is to make sure that—and this comes back to the resourcing issue as well. There is unevenness in the expertise and capacity and resources of local government and for us it is particularly relevant in the peri-urban metropolitan areas. Traditionally recycling within those areas or wastewater and water systems have been provided by the big utilities and therefore the local government has not had to build up the expertise that say local government in some of the regional areas has had to all along have to deal with these kinds of activities. So there is unevenness in the level of expertise that is available. That is an issue we will be looking at in the review as well.

**CHAIR:** This question may be more for you, Mr MacDonald, being from the Department of Local Government. You have heard witnesses say that so often they are dealing with government agencies, and we have seen it in the submissions, and there are frustrations. How are you finding the communication between the agencies and the local government, the councils, in giving advice and those types of things?

**Mr MACDONALD:** For us we deal with councils daily. We also are out there engaging with councils on any reforms that we provide. We do get contacted by council officers that are dealing with this issue. We give the advice that we can. We have very limited expertise in the technical side of this so it is more about helping them use the provisions in the Act to set up a system to assist them. We would point them to other agencies or documents of other agencies to help them do that. But we engage and communicate with councils regularly and they are in a position to pick up the phone and contact us at any time. Recently I attended the Hunter Group. Every couple of years they run a two-day training workshop. I spent a full day with them, providing advice and information and running through some things with them to help them with this task.

**Ms WHITE:** As part of this review that I have been talking about we are doing a phased approach and we have already done quite considerable stakeholder consultation including with relevant government agencies but also directly with councils and, as I said, with Water Industry Competition Act licensees. Council views and considerations have influenced the draft of the issues paper which we are currently drafting up. That issues paper will then go out for public comment and we will deliberately go out into the regions and make sure that we engage very actively with all the stakeholders, including councils, in those regions as part of that consultation. Then when potential options come up in a third phase, once again there will be an opportunity for



consultation. But we are not just waiting to get feedback; we are actually proactively trying to incorporate these issues as we go along and refine the documents at each stage.

**CHAIR:** Thank you for appearing before the Committee today. The Committee may wish to send you some additional questions in writing, the replies to which will form part of your evidence and be made public. Are you happy to provide a written reply to any further questions?

**Ms WHITE:** Yes, indeed.

**Mr MACDONALD:** Yes.

**(The witnesses withdrew)**

**(The Committee adjourned at 3.51 p.m.)**