

**REPORT OF PROCEEDINGS BEFORE**

**GENERAL PURPOSE STANDING COMMITTEE No. 5**

**INQUIRY INTO THE FORMER URANIUM SMELTER SITE AT  
HUNTERS HILL**

**Uncorrected transcript**

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**At Sydney on Thursday 3 July 2008**

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**The Committee met at 9.15 a.m.**

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**PRESENT**

Mr I. Cohen (Chair)

The Hon. R. L. Brown

The Hon. R. H. Colless

The Hon. A. Catanzariti

The Hon. K. F. Griffin

The Hon. C. J. S. Lynn

The Hon. L. J. Voltz

The Hon. H. M. Westwood

**CHAIR:** Welcome to the first public hearing of the General Purpose Standing Committee No. 5 Inquiry into the Former Uranium Smelter Site at Hunters Hill. Today we will hear evidence from former and current residents of Nelson Parade, Hunters Hill; the legal representatives of the owners of number 11, Nelson Parade, Hunters Hill; Hunters Hill Council; NSW Health; the Department of Environment and Climate Change; the Department of Planning; and NSW Maritime. Before we commence I would like to make some comments about aspects of the hearing.

The Committee has previously resolved to authorise the media to broadcast sound and video excerpts of its public proceedings. Copies of guidelines governing broadcast of the proceedings are available from the table by the door. In accordance with the guidelines, members of the Committee and witnesses may be filmed or recorded. However, people in the public gallery should not be the primary focus of any filming or photographs. In reporting the proceedings of this Committee the media must take responsibility for what they publish or what interpretation is placed on anything that is said before the Committee.

Witnesses, members and their staff are advised that any messages should be delivered through the attendants or the Committee clerks. I also advise that under the standing orders of the Legislative Council any documents presented to the Committee that have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any member of such Committee or any other person. Committee hearings are not intended to provide a forum for people to make adverse reflections about others. The protection afforded to Committee witnesses under parliamentary privilege should not be abused in these hearings. I therefore request that witnesses avoid the mention of other individuals unless it is absolutely essential to address the terms of reference.

Finally, could everyone please turn off their mobile phones for the duration of the hearing, including mobile phones on silent, as these interfere with Hansard's recording of the proceedings. I welcome the first witnesses, Ms Katie McGrath and Mr Gregory McGrath.

**GREGORY JOHN McGRATH**, Retired, 76 Wellbank Street, Concord, and

**KATHLEEN ALICE McGRATH**, Human Resources Manager, 76 Wellbank Street, Concord, sworn and examined:

**CHAIR:** Mr McGrath, in what capacity are you appearing before the Committee? Are you appearing as an individual or as a representative of an organisation?

**Mr McGRATH:** An individual.

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

**Mr McGRATH:** Yes.

**CHAIR:** Should you consider at any stage that certain evidence you wish to give or documents you may wish to tender should be heard or seen only by the Committee please indicate that fact and the Committee will consider your request.

Ms McGrath, in what capacity are you appearing before the Committee? Are you appearing as an individual or as a representative of an organisation?

**Ms McGRATH:** An individual.

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

**Ms McGRATH:** Yes. Similarly, if there is any evidence that you wish to give in camera please indicate that fact and the Committee will consider your request. Do either or both of you wish to make a short statement? We have your submissions and rest assured the Committee has had a good look at them.

**Mr McGRATH:** I was not aware that I would be giving evidence today until last night so I have not really prepared anything. Apart from what is in the submission I have not got a great deal more to add than that. I am not really sure what issue I am supposed to address in the opening. Maybe I will let Katie speak.

**Ms McGRATH:** It is probably important to give our own frame of reference, which is that we had not known before January this year that our parents may have died as a result of exposure to the radioactive waste. We had always believed that it had been a terrible coincidence that they have died. When we read a number of articles in the Herald about some deaths that had occurred potentially as a result of being exposed to radioactive waste we talked to each other and said it seems very bizarre that our own parents died within nine months of each other, one from leukaemia when she was 35 and one from the stomach-related cancers at 39 when there was not really a history of that in our family.

To learn that their deaths may have occurred as a result of being exposed to the radioactive waste that we had never been aware was buried anywhere in that street has been a horrendous shock to us. What we really hope to have achieved in this inquiry is to have a full investigation and understanding of the impacts and the effects on public health, as mentioned in the terms of reference, and an understanding that that has had a significant impact on our lives as a result.

**CHAIR:** I understand by your statement that tests were involved with public health and you have some criticism about the efficiency of those tests. Could you detail your concerns to the Committee and perhaps any other relevant communications that you have had with public health over the years that you have been involved in?

**Mr McGRATH:** As Katie said, we have had very little involvement—in fact, no involvement whatsoever. We are unaware of the reasons or any cause of our parents' death up until, as Katie said, around about January, February this year when we read the article. However, since then we have been shown some of the correspondence from the Department of Health dating back many years into the seventies, and that indicates that tests had been done in the street but that the results of those tests showed no significant issue with regard to residents' health. What was in the letter was that those findings should be kept from the public. I do not have that letter here with me; one of the other residents had shown it to me.

That just concerned me and makes us both angry because it has been 35 years and we were unaware we had been living in a street that had that kind of problem. For our parents who had moved there—surely, they would not move to a street that had any uranium smelter or history of it or tailings being dumped anywhere in the street, with four children. So, there is certainly anger with regard to that, but we are not, as Katie mentioned too, we are not living in the past and we have all moved on from there. But to find out that this could have been made public a lot sooner and that perhaps our parents might even still be alive had we not moved there.

**CHAIR:** Was there any awareness by your parents on purchasing the property or any information given about the nature of the residue there?

**Mr McGRATH:** As orphans and being 11 when they died, we did not have those kinds of discussions with our parents. Also, not having any near relatives in the country to go to, we were left in foster homes. There has no handing on of information; we have not been able to discuss that with them. I cannot answer that question. I am certain that mum and dad would not have moved to a street where that was an issue had they been made aware of it. I have heard from other residents that some sort of notice was sent, perhaps from the Department of Health, in the mid 1970s to warn them that there had been a uranium smelter there and that there was some issue about tailings being dumped in the street. Our parents were the kind of people who bought houses and did them up and moved from one place to the next. That was their MO. It was unusual for our parents not to do that. It was the only place we lived that they did not move on from. I do not know why and they are not around to ask. Unfortunately, we are not in touch with any of their friends or that sort of thing. We went to a very different place after they died.

**CHAIR:** Did they do gardening? Did they access next door or do any other activities that would put them in direct contact with material on the next-door property?

**Mr McGRATH:** I understand that the house next door was not there then; I remember a vacant block when I was a kid. I do not remember having much contact, except with a fellow on the higher side of the road called Bruno, who was a builder, like my father. For some reason I remember him, but I do not remember the other residents. Perhaps there were no kids our age.

**Ms McGRATH:** Mum and dad also ran a restaurant at Haberfield and they grew vegetables in the garden. Greg would talk about areas that were cordoned off with string and stakes and all the vegetables there.

Mum and dad grew the vegetables themselves, so they were the ones digging in the soil. Dad also built a retaining wall.

**Mr McGRATH:** It was not really a formal garden. There were scaffolding planks end on end pushed into the soil with string around them. I heard of another lady in the street who apparently had a formal vegetable garden. This was nothing on that scale; it was almost roughshod.

**CHAIR:** They worked in the yard and the garden.

**Mr McGRATH:** Yes, but it was not a huge formal garden. I remember planks end on end in the soil and a builder's string line being wrapped around stakes. It was nothing that you would call a huge formal garden. But they did have a small vegetable garden at the front, right-hand side of the house as you looked towards the water. I do not even know whether it was on our block, because I do not remember any fencing. I remember us walking down a path.

**The Hon. RICK COLLESS:** That was on No. 11.

**Mr McGRATH:** I believe the house may have been known as No. 17 at the time. It is now known as No. 21.

**The Hon. RICK COLLESS:** That is quite a long way from 7, 9 and 11, which are the subject of this inquiry.

**Mr McGRATH:** It is probably about 70 metres away, perhaps.

**The Hon. RICK COLLESS:** They lived there for only two years before they died.

**Mr McGRATH:** Again, we are not sure, given our age. It was about two years, but it may have been longer. I do not know. A land title search would probably show if someone wanted to do one.

**The Hon. ROBERT BROWN:** Do either of you recall ever getting access to or playing on that vacant site where Nos 7 and 9 would have been?

**Mr McGRATH:** My brother was a year older and Katie was much younger. We spent most of our time playing at a place called Kelly's Bush. We had a little boat—a Heron—that dad bought us and we kept it at a boatshed down on the water. It has been changed now, but at the time on the waterfront there was a bunch of concrete, rocks, rubble and that sort of stuff between our house and the boatshed. We would often go down there. I used to build model boats.

**Ms McGRATH:** You would go on the vacant block.

**Mr McGRATH:** We would have gone across it. We would not spend a lot of time in residents' houses.

**CHAIR:** Were you aware of any bags of sand or material—big bags—at the bottom of any of those properties?

**Mr McGRATH:** Not that I remember. No, I cannot recall.

**The Hon. ROBERT BROWN:** But there was rubble and things at the water's edge.

**Mr McGRATH:** There was a bit of a drop at the front of our block. There was a bit of a walkway or a climb down to the water, which we did very rarely as kids. You could get along the waterfront in the old days to where our boat was kept.

**The Hon. RICK COLLESS:** That would have been along the front of what is now Nos 7, 9 and 11. Is that correct?

**Mr McGRATH:** Yes.

**The Hon. RICK COLLESS:** So, given that No. 21 was further down the street you would have walked over that land.

**Mr McGRATH:** Yes. You could get there two ways: you could walk along the street and on a path down to Kelly's Bush, but as kids we went along the waterfront. I do not know whether we were on people's land, but we could get along there.

**The Hon. ROBERT BROWN:** Kids don't worry about that.

**The Hon. RICK COLLESS:** Did your parents ever walk along there?

**Mr McGRATH:** I know dad would have because he sailed with us. He bought us a boat and took us sailing. Sadly, my recollection of all that is very vague. As an orphan you probably block a lot of it out. But we certainly went along there. I could not say we spent a lot of time playing on the land at all; that is not my recollection. We would have passed through at the bottom of the block, not through the back of it or anything like that.

**The Hon. ROBERT BROWN:** Do you recall whether your father or your mother fished? Were they fishing people?

**Mr McGRATH:** They had a boat, not just the sailing boat. Dad had a boat that he kept moored. In fact I do not remember him—I remember him fishing off the boat, but not off the front of the house or anything, no.

**The Hon. ROBERT BROWN:** Righto.

**Ms McGRATH:** The other thing, if I could just add—

**CHAIR:** Please do.

**Ms McGRATH:** It is just that, you know, the only thing that we had seen or the only information relating to this waste came up initially around blocks 7 and 9. Until the recent past, the last week or so, with the independent testing having been conducted on No. 11, it has shown horrendously disproportionate amounts of radioactive waste there. It has since come to light that there is also waste and danger spots on block No. 11. It is surprising to me that, with that amount of evidence that we are now seeing about the radioactive waste, that you would not extend and look at the other blocks, particularly when our parents died so strangely.

**Mr McGRATH:** Block 13 also has waste on it.

**Ms McGRATH:** That is what I am saying. So, yes, 13 has now been shown to have waste on it as well. I guess that is part of our position here. And now there is the fact that the results of the testings on block 11 have shown that the previous government testing was clearly inadequate, and it never showed the levels of waste that are now currently being observed and are now well documented for No. 11.

**CHAIR:** When you are referring to the inadequacy, are you saying that the type of testing is inadequate, or are you referring to the fact that, years ago, the levels that were acceptable then obviously are unacceptable today? Are you commenting here on the type of testing they did, or the way they recorded it?

**Ms McGRATH:** I think it is a combination of the type of testing but also not showing the levels that currently we can see in tests that have been done on No. 11. Never was that made clear or apparent. My understanding is that it is not likely that it has changed that much. It is just that the testing itself perhaps was not at the level required to show what we are now seeing.

**The Hon. LYNDIA VOLTZ:** You said earlier that there was an issue about the Department of Health and you had seen a letter from a resident stating that they did not want people to—correct me if I am wrong—in fact they did not want residents informed. Do you recall who actually had that letter, or do you have a copy of that letter?

**Ms McGRATH:** Yes, I know.

**Mr McGRATH:** We know who has the letter, and I am not sure whether that person wants to hand it—is that up to us to say that?

**The Hon. LYNDA VOLTZ:** No, it does not matter. I am assuming that the Department of Health will have copies of letters it sent anyway.

**Ms McGRATH:** Yes.

**Mr McGRATH:** It is one of the residents who has the letter and that is who has shown us the letter.

**The Hon. LYNDA VOLTZ:** Oh. And what does the letter say exactly?

**Ms McGRATH:** It said, "We can't confirm that your husband's illness is as a result of the radioactive waste that is buried on this land. We don't admit liability."

**Mr McGRATH:** Yes.

**Ms McGRATH:** However, I think they go on to agree to purchase the property and also make a specific request not to approach the public or the press or media to discuss this issue.

**The Hon. LYNDA VOLTZ:** And do you recall what that letter is dated as—what date?

**Ms McGRATH:** The seventies.

**Mr McGRATH:** Seventy-two—no, the answer is to that.

**Ms McGRATH:** No, not past then.

**The Hon. LYNDA VOLTZ:** But it relates to the actual purchase of the property by the Department of Health, due to the radiation?

**Ms McGRATH:** There are a number of letters. I mean, they were all well filed in a clear plastic folder and there were a number from the Department of Health.

**Mr McGRATH:** Yes.

**Ms McGRATH:** This was a specific one that really shocked us because it said, "Please do not approach the media or the public."

**The Hon. LYNDA VOLTZ:** Right. But it specifically relates to a cancer—a person who has cancer?

**Ms McGRATH:** Yes.

**The Hon. LYNDA VOLTZ:** And the purchase of the property due to radiation.

**Mr McGRATH:** Yes.

**CHAIR:** That was a condition of sale, was it, that you agree?

**Ms McGRATH:** No, it was not. It did not specify that that was a condition of sale.

**Mr McGRATH:** That we recall.

**Ms McGRATH:** That I recall. I do not remember those words, "This is a condition of sale.", no.

**The Hon. LYNDA VOLTZ:** You have FOI-ed the Department of Health on documentation? Is that correct? You said you had FOI-ed the Department of Health?

**Mr McGRATH:** No. Well, someone else has, and we have been shown access to that.

**The Hon. LYNDA VOLTZ:** Right.

**Mr McGRATH:** We have been given access to that.

**The Hon. LYNDA VOLTZ:** So you are looking at someone else's documentation?

**Mr McGRATH:** Yes.

**The Hon. LYNDA VOLTZ:** So their request was a broad one for all documentation relating back over time?

**Mr McGRATH:** I imagine so. I did not do it, so—

**The Hon. LYNDA VOLTZ:** Okay.

**Mr McGRATH:** Yes. But, yes, there were quite a number of letters. As Katie said, going back probably over a year or two, there were a number of letters. There were a number of them stating that but I recall the letter saying that they did not wish to disclose this information to the public.

**The Hon. LYNDA VOLTZ:** You cannot recall when the earliest contact was that the Department of Health showed—that the earliest letters were going back to—in regard to ongoing consultation between the residents and the Department of Health on this issue, or any environmental department, as it might have then been known?

**Ms McGRATH:** I could not accurately say.

**Mr McGRATH:** We do not have any correspondence.

**Ms McGRATH:** We are not in possession of them.

**The Hon. LYNDA VOLTZ:** Okay. It is just to raise the issue: I was wondering if you had a view.

**Ms McGRATH:** Yes.

**The Hon. RICK COLLESS:** Do you know if the house that you lived in has been tested?

**Mr McGRATH:** As far as we are aware, it has not. I have just been told that they probably have not made it up that far. Originally it was only 7 and 9 that was thought to be affected, but as Katie was saying before, the Government actually did tests on other properties—I understand it was 7 and 11, or 11 I think and perhaps 13—but okayed those properties. A number of them were actually sold by the Government to private interests as a result of those tests, and the test that have just been done this week have shown, as we all know I think, that the levels are much higher and unacceptable for human—for someone to occupy the property. So despite our parents' deaths, as far as we are aware, no-one has actually tested further than 13, I think, in the street. We were not interested in it. We knew about it only from, what, January-February this year that this was an issue at all.

**The Hon. RICK COLLESS:** There has not been any testing on No. 21, to your knowledge anyway. Your parents lived there. Does it not seem a bit strange that living so far from 7 and 9, if that is the only place where there is radiation, your parents were affected by radiation?

**Mr McGRATH:** As we were saying, 7 and 9 were thought to be the only ones affected, but it has now been shown that 11 and 13 have been affected.

**The Hon. RICK COLLESS:** Yes. The point I am trying to come to is: Do you think that the radiation that is there probably is far more widespread than just 7 or 9?

**Mr McGRATH:** Absolutely. I have seen photos on the Internet of the site when it was, I guess, in 1916, I think it was, or perhaps 1920 or something. But it shows from the water. It is a picture, taken from the water, of the site. Now there are paths all through—or perhaps horse tracks, I am not sure—all through that flattened bush, all through the whole side of the hill.

**The Hon. ROBERT BROWN:** Can you make an estimation of what range of numbers in Nelson Parade would have been involved, looking at that expanded area that you saw on that photo?

**Mr McGRATH:** Yes, well, it is not a big spread at all, and I guess at the time—I think it was only one house past ours. But these paths that I saw in this photograph go through the entire side of the hill. Now it makes sense to me that the tailings from this uranium smelter would have been dumped away, not just in the back of the site, but dumped away from the site, perhaps. It is worth the inquiry looking into.

**The Hon. RICK COLLESS:** What about the top side of the road? Do you think that there was other—

**Mr McGRATH:** My view is that it is too steep. If you look at it, it would have been too hard to get up.

**The Hon. RICK COLLESS:** Right.

**Mr McGRATH:** The lower part of the street I think is where most of it would have been done, and I am sure that that street that is there now, if that was a path, you can see that in the photograph. There was actually a track there going along there, and further away—way further, I guess, into Fern Bay, the corner of Fern Bay, where Pulpit Point I think is now, and that sort of thing. But no-one has done any testing there.

**The Hon. RICK COLLESS:** How far on the other side of No. 21, away from 7 and 9, do you believe that activity was going on? Obviously it was past your house for some distance, or where your house is?

**Mr McGRATH:** Again, it is conjecture, is it not? I can a look at that photograph and make the assumption, given that our parents died nine months apart from these cancers. It is extraordinary that these tailings were in fact dumped, as we know now, further than 7 and 9, as it was originally thought. Now it is 11 and 13. No-one has tested any further. My belief is that it certainly went much further than that. We are only talking about 70 metres or something like that. At the time there was only one other house between our house and where you are talking about, 13. Ours was No. 17 I think at the time, so, you know, these were blocks that were vacant land.

**Ms McGRATH:** There are not many houses past 21 anyway. There are a few. It is a very small, dead-end street at that end. There were not any of the big houses that are there now when we were there.

**Mr McGRATH:** We were almost at the end of the street. That is the last and the second-last house. The street descends into a cul-de-sac further down, perhaps not 100 metres.

**The Hon. HELEN WESTWOOD:** Since you have known of the contamination at the site earlier this year, have you had any direct contact with the Department of Health or the Hunters Hill council or any government agency, department or authority that might be able to give you information?

**Mr McGRATH:** Apart from the Freedom of Information Act and the people who have given us government records, we have not had any formal meetings or contact with government departments, no.

**The Hon. HELEN WESTWOOD:** The information you have was gained through other residents or the media?

**Ms McGRATH:** It has been a combination of other residents, through the media, and through members of Parliament and so on.

**The Hon. RICK COLLESS:** You said your parents did a lot of gardening there. Did they garden only on their own block or also on some other blocks?

**Mr McGRATH:** I am not sure. My recollection is, having looked at it, I do not remember any fences down the side of our property. I cannot say it was on our block. I think it was.

**The Hon. RICK COLLESS:** It was adjacent at least, it would not have been down on Nos 7 or 9?



**Mr McGRATH:** No, not at all. If anything it was either within the boundary or just on the other side. I am not sure if there was a vacant block there.

**The Hon. RICK COLLESS:** That clears it up for me, thank you.

**The Hon. ROBERT BROWN:** Did you say your residential address was No. 17 or No. 21?

**Mr McGRATH:** It is 21 now.

**The Hon. LYNDA VOLTZ:** It was know as 17. In the 1960s they had different numbers.

**Mr McGRATH:** That is right.

**The Hon. LYNDA VOLTZ:** On this plan it is No. 21.

**Mr McGRATH:** That is correct.

**CHAIR:** You will be given an opportunity to read the transcript and will be provided with a report in due time, when it is finalised.

**Mr McGRATH:** We were asked to bring in photos of the block. Do we need to show them to anyone?

**CHAIR:** There is no dispute about that.

**Ms McGRATH:** And we have the death certificates.

**Mr McGRATH:** Showing leukaemia and stomach cancer, and that sort of thing.

**CHAIR:** Give that to the staff and they will make copies.

**(The witnesses withdrew)**

**KATHIE LOUISE FRANKLAND**, Office Manager, 13 Nelson Parade, Hunters Hill,

**PENELOPE ANNE DAVEN**, Geologist, International Base Metals, 15A Prince Edward Parade, Hunters Hill,  
and

**PHILIPPA JANE CLARK**, School Counsellor, 17 Nelson Parade, Hunters Hill, sworn and examined:

**CHAIR:** In what capacity do you appear before the Committee, as an individual or a representative of an organisation?

**Mrs FRANKLAND:** As a member of the Nelson Parade Residents Group.

**Ms DAVEN:** As a member of the Nelson Parade Residents Group.

**Mrs CLARK:** As the Co-ordinator of the Nelson Parade Residents Group.

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

**Mrs CLARK:** Yes.

**Ms DAVEN:** Yes.

**Mrs FRANKLAND:** Yes.

**CHAIR:** If any of you wish to give evidence or produce documents to be seen or heard only by the Committee, please indicate that and the Committee will consider your request. Would any of you wish to make an opening statement?

**Mrs CLARK:** I am the Co-ordinator of the Nelson Parade Residents Group and have lived in Nelson Parade since 1985. I have raised two children in the street.

**Ms DAVEN:** I live in No. 12 Nelson Parade, which is the high side of the street. We bought the house in 1984. I have three sons who have lived there.

**Mrs FRANKLAND:** My family moved into Nelson Parade in 1965, they bought Nos 13 and 15 Nelson Parade, so I grew up there. I moved back there with my family, my young children, in 2000. We built on No. 13 in 2001 and we still live there.

**Mrs CLARK:** At the outset it is important to acknowledge, as stated in our submission, that we represent the current residents of the street. We have been in contact with some of the previous residents, but certainly not all of the previous residents of the street. This issue in the street has been ongoing for 40 years. It was first raised in 1965 when the Conlon family were advised that there was a problem with their property. Over that 40 years we have seen testing and retesting and reassurances from the Department of Health that everything is fine and promises to clean up various sites. We have newspaper articles that we have copied for the Committee, which is part of our submission, there is a bit of a story about all of that.

**CHAIR:** The Committee has your submission.

**Mrs CLARK:** Those articles indicate the amount of confusion at that time about the extent of the contamination. There was confusion about which sites actually have contamination and there was confusion about the validity of the testing. Many reports talk about changing the standards, the kind of testing that was done, whether it was soil samples or other kinds of testing. There is reference that maybe the material is decaying and the contamination effects are becoming worse. Also there was confusion about the foreshore land, in particular when the Department of Health's proposal to clean up the land was put forward in November last year it did not even include the Maritime Services Board's land contamination.

The Department of Health put forward a proposal in November last year to clean up and remediate the land. For many of the older residents we were absolutely delighted that after 40 years we were going to get some action and finally the place was going to get cleaned up. However a lot of the newer residents were absolutely

shocked and dismayed, because they had no idea that there was even contamination in the street. To this day they are highly anxious and very, very concerned. Since November, when this was really raised, the removal of the contamination issue seems to have been dominated by a lot of other agendas. There have been political agendas and compensation agendas.

The residents have been fairly concerned that nobody seems to be concerned about the health of the current residents in the street. For instance, the current owners of No. 21 only learnt through the media that their house was supposedly absolutely unsafe, and no-one has ever contacted them to tell them that the house they had been living in with their two young children could in fact have been responsible for some deaths. We feel that the media has had a big impact on our lives in the past six months for the residents in the street. Every time we pick up the newspaper reports there are many inaccuracies, there is a lot of misinformation, there is a lot of sensationalism, and there seems to be a focus on uncovering the big stories about this whole issue.

For instance, in the beginning the site was referred to as a secret waste dump. We know that it was not a secret nuclear waste dump. They endlessly show on the television and the media this photograph of this factory. This actually is a smelter works in Kelly's Bush, which is nowhere near Nelson Parade. It is actually at the end of Alfred Street. We pick up the newspaper and this makes us feel, first of all, that we distrust the media, so that makes us distrust everything we are reading about testing that is being done or not been done. It has made many of us fear about what is the truth about what is going on and the health concerns for all the people in the street.

We are extremely embarrassed to be living in this street. We are all the brunt of jokes—are we glowing in the dark, here comes tick, tick, tick, the Geiger counter girl. Many of our families report that their friends are not allowed to come and play in our street because people think it is not safe. This has had a really big effect on our lives in the past six months. So now we hope that through this inquiry we will actually get some thorough testing that is completely valid and that is through the whole possible affected area, which indicates the extent of the contamination and the level of the contamination. We hope that the outcome of this inquiry is that you arrive at the safest way to remove this contamination and to store it appropriately. We hope that this contamination gets removed permanently and the site is remediated once and for all, and we can just get on with being a residential street. That is what I would like to say to start with, and we are very happy to answer whatever we can.

**CHAIR:** When you are talking about thorough testing could perhaps describe from your perspective the extent and level and effectiveness of testing? Have they gone around, for example, to any other properties? Do you have any awareness of potential material being on other properties in the area?

**Mrs CLARK:** There have been some verbal reports of testing around in the street over many years. For instance, when we bought over 20 years ago we remember having some statement on our land title deeds that our place, No. 17 Nelson Parade, was clear. Similarly, in the street people have reported that kind of information but nothing written down. In terms of more recent testing, the owners of No. 21, as we have put in our submission, had to have it tested because they are in the middle of trying to build and the builder has refused to start and the bank refused to lend them a loan because of media reports about their property. So they had to have it independently tested at their own cost, and it was found to be free. That has been one case of recent testing.

We know that back in February some places had stones screened—I think No. 3. There was some recent testing but there were questions as to whether there was a screening testing or whether it was soil samples or whatever. Then there was a lot of media reporting about the earlier testing that was done on 7 and 9—have standards changed? That seems to come up frequently. There is also a reference to as again whether it is screening testing or this more complicated soil analysis. We know that there is contamination. As residents we think there is contamination on 5, 7, 9, 11 and 13 and on the foreshores, but we do not know the extent and the level. We know that 15 were tested and is clear, and we know that my 17 is clear. Our neighbours at 19 have never had their place tested but they say that it is clear.

**Ms DAVEN:** When we moved in in 1985 I remember somebody coming around with a Geiger counter and he said, "Don't worry, love. It's okay. You are not above any level to be concerned about." That is the first time we knew—

**CHAIR:** Where was that person from? Was it a council person or the Health Department?

**Ms DAVEN:** I think he was from the health commission.

**CHAIR:** So this is when you purchased the land. Was it part of the purchase—

**Ms DAVEN:** It was after we moved in.

**CHAIR:** Coincidental.

**The Hon. LYNDA VOLTZ:** What year was it again?

**Ms DAVEN:** I think it was 1985. It was just after we moved in. I understood that he was doing the whole of the street because we are on the high side. We are 55 stairs above. The high side is quite a sandstone.

**CHAIR:** It is above the road itself.

**Ms DAVEN:** Yes. It is quite a sandstone cliff, the high side.

**CHAIR:** Do you have any recollection, when the person reported that to you, that there was nothing in evidence or it was all just—

**Ms DAVEN:** He just said there was nothing to be concerned about. We were not worried. It seemed absolutely bizarre that we would be affected.

**The Hon. RICK COLLESS:** They actually climbed up the 55 stairs to check your place, is that correct?

**Ms DAVEN:** Maybe they were asked to do that.

**The Hon. RICK COLLESS:** That is what I am getting at. Obviously they were looking for something—

**Ms DAVEN:** No, I do not think so.

**The Hon. RICK COLLESS:** —or were they just wandering around?

**Mrs CLARK:** Can I just interject? We bought our house in 1985 and we are exactly opposite Penny, so it could be that as part of the sale of our house they felt that they wanted to check around the place across the road as well as our place. I do not know.

**CHAIR:** Did you get a radiation report on your place?

**Mrs CLARK:** We do not have anything in writing but we remembered something being on the title deeds to say that it was clear. We have tried to get our title deeds back but it is very difficult when you have a mortgage and they are in archives.

**The Hon. LYNDA VOLTZ:** Banks do not like to give them up.

**CHAIR:** Ms Clark, you are quite clear about that photo not being accurate.

**Mrs CLARK:** Yes.

**CHAIR:** My understanding is that it is in the Government report by Sinclair Knight and Partners from 1987. It was not just a media report.

**Mrs CLARK:** This photo you mean?

**CHAIR:** Yes, and also my understanding is that Dr Gavin Mudd supplied the picture and he got it from the South Australian Department of Mines. He will be appearing. You seem very clear about the fact that that was not an accurate description of the industry on site.

**Mrs CLARK:** We downloaded this from the web site about Kelly's Bush smelting works. That is where this photo comes from. We know that this is what it is. It is not Nelson Parade. You can see the rock face, and those of you who know the street know that there is no major rock face like that. That fits exactly in Kelly's Bush where the smelter works was. It is a totally different smelter works—nothing to do with Nelson Parade.

**The Hon. RICK COLLESS:** So what were they doing there?

**Mrs CLARK:** They were smelting tin. It was a very industrial area when we all moved in.

**Mrs FRANKLAND:** When my parents moved in in 1965 they certainly did not know anything about it. The first they remember hearing about it was in 1977 when they got a letter from the Health Department saying there was some contamination. They had to buy two blocks because the house was over the boundary. They changed the numbers, but on the current numbers they lived on 15 and 13 was a vacant block. They got a letter from the health commission saying there was a small hot spot on their boundary with number 11 and on the MSB foreshore but it would be something the Health Department would look at. It was also noted on their land title. I think a section 55 notice was put on their title so they could not actually sell the land at that stage. I have got numerous letters back and forward between the different health departments, public works, Hunters Hill Council.

When my parents tried, they even offered to try to clean it up at their own cost, but each time nothing happened, and it would come up again and then eventually in 1992 the Health department decided to demolish seven and nine, and put a fence around that. My parents tried to get their bit of contaminated soil, their hotspot moved, and put onto that government land, but nobody was really interested in that. They certainly had the feeling that they were—I am not sure about No. 5—but on our side, the only private owners of land there, and it was a little bit, and they were sort of ignored. Nobody was really interested. There is correspondence going back and forward and all sorts of things. Eventually in 1994 they got a letter from the EPA saying the levels are now below the recommended safety levels and so the notice under the unhealthy building lands Act will be removed off their title. So it has gone from it was a hotspot, they could not sell, to 20 years later, it is okay.

**CHAIR:** But no remediation or no change to the physical aspects of that property?

**Mrs FRANKLAND:** No remediation, no.

**CHAIR:** Do you have a report on the levels of that site?

**Mrs FRANKLAND:** Yes, when we arranged with them to buy the spare block one of the problems was we put our plans through council and council actually eventually approved them, subject to us getting a report on the radiation levels on the site. So we actually had to then get a proper report, which we did through ANSTO and I think in ANSTO's media release the other day it actually referred to it. We were the ones who got the 2001 ANSTO report. That came up with we had a hotspot, which as long as it basically was not under the house, that was okay. I have the report here if you need a copy. One of the things it did say was they did not know which standards to even apply to it. I think it listed three or four different—

**CHAIR:** Are you referring to ANSTO?

**Mrs FRANKLAND:** Yes. It has listed three or four different standards and apparently at that stage New South Wales EPA didn't have an official standard as to what was safe or not. So we actually had to get it all tested and then the council let us build. That has been one of the problems we have had has been the change in what is acceptable and what's not acceptable. We got the clearance from the Government saying the land was clear you could sell it, and then the council well, actually you can not build on it until you get it tested. There are just all these different hurdles. Although we think it is safe, you know, it is just—the guidelines, everything seems to change all the time. You do every now and then, sort of, think if we could just get one standard and get it all tested and sorted out, it would make life a bit easier.

**CHAIR:** Regardless of the standards that are applied, do you have readings of the levels of radiation and the type of radiation on that site?

**Mrs FRANKLAND:** Yes.

**CHAIR:** Will you provide that to the committee?

**Mrs FRANKLAND:** Yes, it is in this report.

**CHAIR:** We do sympathise. There are two things: the different calibrations which can get very confusing, and also what are current levels of acceptability, and we understand that has changed over time.

**Mrs FRANKLAND:** Yes.

**The Hon. ROBERT BROWN:** Did you build in 2001?

**Mrs FRANKLAND:** Yes.

**The Hon. ROBERT BROWN:** The hotspot that was on the boundary between Nos 13 and 11 appears to be at the back corner where your current building is. Is that right?

**Mrs FRANKLAND:** I have not actually checked it myself.

**The Hon. ROBERT BROWN:** Do you say that area has not been remediated? In other words, you remember you said you wanted to shift that stuff over onto government land, has it ever been done?

**Mrs FRANKLAND:** No.

**The Hon. ROBERT BROWN:** Your place is the one with the very nice lawn at the back?

**Mrs FRANKLAND:** It depends whether it is mowed.

**The Hon. ROBERT BROWN:** As far as you are concerned that area has never been remediated?

**Mrs FRANKLAND:** That is right.

**The Hon. LYNDA VOLTZ:** Are you on No 13?

**Mrs FRANKLAND:** Yes.

**The Hon. HELEN WESTWOOD:** You have talked about your concerns about information, lack of information or misinformation. Have you been able to speak directly with the Department of Health or council or any other government department that may be able to assist you with accurate information? For example, have you invited them to speak at and attend one of your meetings, or corresponded with them directly?

**Mrs CLARK:** I will start by replying. We received a letter from the Department of Health reassuring us that everything was fine—this is when the media blew up in the past six months. I have got a copy of the letter here. But also, in November when the proposal to clean up the land was put forward, there was community consultation. So we had a meeting, the residents group, with a representative from the Department of Planning. Elton Consulting came, representing the Department of Health and GHD who were part of the proposal to clean up the land. So yes, the Department of Health were represented through Elton Consulting. We did get this letter reassuring the street that, in fact, everything is fine and there is nothing to worry about.

**The Hon. HELEN WESTWOOD:** Are you also aware of any impacts or evidence of ill health?

**Mrs CLARK:** Amongst the current residents?

**The Hon. HELEN WESTWOOD:** Yes, that is out of the ordinary. There is nobody who has come forward to say that they think that they have anything currently that is related to the contamination. But there are issues about this. If the contamination is much more widespread than we all think then maybe some of the things that we are all suffering from could be related. So right now there is no-one jumping up and down saying, you know, "I am in trouble because of it", but we do not really know.

**The Hon. HELEN WESTWOOD:** To your knowledge no-one is collating that information and making comparisons?

**Mrs CLARK:** No, but we have not been to oncologists. We do not know what is storing up? How would we know? It is not the kind of thing you can check out. Your GP says "Look, your fine. How could it possibly be related? You're 150 metres away." I guess, that is the way we've all proceeded through our lives to think that we are safe.

**The Hon. LYNDA VOLTZ:** Mrs Frankland, you mentioned the different standards between ANSTO and what the council required for the testing on your property. Do you know what standard the council was using?

**Mrs FRANKLAND:** It was more in the ANSTO report. It listed three or four different standards and said "We do not know which one to apply", Although we had the fear—the Health department saying the levels are below recommendation, you can do what you like—the council still said "You have got to go and get it tested."

**The Hon. LYNDA VOLTZ:** Did that relate to the fact that there was a notification on the land title?

**Mrs FRANKLAND:** That had been removed by then.

**The Hon. LYNDA VOLTZ:** It had been removed but council still asked you to do it anyway?

**Mrs FRANKLAND:** Yes.

**The Hon. LYNDA VOLTZ:** What would reassure you? Where would you draw the line on that street and what would reassure you in terms of testing? Is it if the whole foreshore of that street was tested? Would you want the upper properties tested? Would you want the soil tested? To what level would reassure the residents and to what standard? I do not know whether you have an idea about a standard—obviously there is the ANSO standard. At the end of the day it is what reassures the people who are living there? What would reassure you on the street?

**Mrs CLARK:** Well, if there is any credence given to claims about No. 21 you would have to say that pretty well the whole foreshore. Even though it is cliff face and you cannot imagine how it would possibly ever travel that distance, but for me I would be comfortable if there was a high standard of testing across the whole of the foreshore area.

**The Hon. LYNDA VOLTZ:** Soil testing across the foreshore properties on that street?

**Ms DAVEN:** Definitely soil testing.

**Mrs CLARK:** And the house that is opposite the site, the 7 and 9 sites, I think should be definitely assessed properly as well.

**CHAIR:** When you say "opposite, the other side of the road?"

**Mrs CLARK:** The high side of the road.

**Mrs FRANKLAND:** It is 2 Gladstone Avenue.

**CHAIR:** Do you have any concerns or anecdotal evidence of fill being put in sites around that general area?

**Mrs CLARK:** There are no stories in the street about people trucking buckets of soil up and down the street. The contamination that we know about now is probably all that is there. But it is this hype and the media stuff that has made us anxious that perhaps there is more to this than we really know.

**CHAIR:** Understandably.

**Mrs CLARK:** But there are no stories about anyone moving contamination from way down the foreshore up the cliff or along the cliff. There are houses all along the area back from 7 and 9 were from thirties, weren't they; certainly from the sixties.

**Ms DAVEN:** My house was built in 1918.

**Mrs CLARK:** There are houses there certainly from the sixties so you could not walk along people's properties.

**The Hon. LYNDA VOLTZ:** If they did the soil testing would you be happy with the ANSTO standard?

**Mrs CLARK:** Yes, that seems to be the best standard. We do not really know very much about the technical stuff.

**The Hon. LYNDA VOLTZ:** Me either, but sometimes when there is a media story around it is what reassures people rather than anything else.

**Mrs FRANKLAND:** I am fairly confident that from the testing on our block there was one hot spot and then the levels went right down, so I am pretty confident that we are at the edge.

**The Hon. LYNDA VOLTZ:** Obviously from the residents' point of view, the original statement by the Department of Health was that the sites would be remediated and that would have to include your property, one would assume. That would also reassure them as well. So if there was the soil testing and the remediation, that would reassure people?

**Mrs CLARK:** That is what we want. We want the extent of this problem known and then it to be gone.

**Ms DAVEN:** When the public meeting in November last year was held, the Department of Health was only planning on remediating 7 and 9.

**The Hon. LYNDA VOLTZ:** I am not the department.

**Ms DAVEN:** That was all, so we are hopeful that all beyond 7 and 9 will be looked at as well and remediated.

**The Hon. RICK COLLESS:** Phillipa, you said that you were under the impression that your place was clear and 15 was clear?

**Mrs CLARK:** Yes.

**The Hon. RICK COLLESS:** Has any testing been done on those, that you are aware?

**Mrs CLARK:** I know that Kathie's parents are 15.

**Mrs FRANKLAND:** I do not think that 15 has been tested.

**The Hon. RICK COLLESS:** So 17 has not been tested?

**Mrs CLARK:** When we bought into the property some 20 or so years ago there was something on our title deeds that made us go, "Oh, this is pretty strange. Look, here is a certificate telling us that it is clear".

**The Hon. RICK COLLESS:** So there must have been some testing done to say that?

**Mrs CLARK:** That is right.

**The Hon. RICK COLLESS:** But in more recent times when the other testing has been going on, nothing has been done up your end?

**Mrs CLARK:** No.

**The Hon. RICK COLLESS:** Or further along the street?



**Mrs CLARK:** No.

**The Hon. RICK COLLESS:** Twenty-one has?

**Mrs CLARK:** Well, 21 has because that is the site that the people were trying to build. That is the one of the McGraths.

**The Hon. RICK COLLESS:** So that has been tested recently?

**Mrs CLARK:** Yes, recently, because the people who own that site are trying to build a house and the builders would not turn up and the bank would not give them the loan without it being paid for and done independently because they were all scared that it was contaminated, so that has been tested.

**The Hon. RICK COLLESS:** Do you know who did that testing? Was it ANSTO?

**Mrs CLARK:** No, it was not. I do not know the name of who it is, but the family are happy to provide the report if the Committee wants it. Certainly further along none of those residents even really knew anything about it and our neighbour at 19 definitely does not.

**The Hon. RICK COLLESS:** If there is to be a full assessment, as you alluded to, what do you think should be the extent of it? How widespread should it be across that area?

**Mrs CLARK:** Perhaps to put the issue to bed, certainly from 21 backwards right through to 1 or 3. The owners of 1 moved in seven years ago and they were told that their site was cleared to but, again, what is the level of the testing? That is a bit hard to know. That is certainly the outside boundaries of it. The end of 1 goes into Kellys Bush and certainly further along from 21, it is miles away and I do not know if they would have any concerns but they certainly are involved in the residents group, but everyone is highly anxious.

**The Hon. RICK COLLESS:** Understandably.

**Mrs CLARK:** The short answer is that I know it is an expensive proposition but probably the whole lot should be done.

**The Hon. RICK COLLESS:** It may be an expensive proposition but the ramifications of not doing it are probably far more expensive?

**Mrs CLARK:** Exactly. I do not think anyone wants people to turn around in another 40 years and say, "What about this property?"

**The Hon. RICK COLLESS:** Are you aware of any other off-site movement to any other blocks of land in the vicinity?

**Mrs CLARK:** Of people taking soil?

**The Hon. RICK COLLESS:** Yes?

**Mrs CLARK:** No.

**Mrs FRANKLAND:** When 7 and 9 were initially knocked down I am sure some of the soil was put into two drums and taken to Lakemba or some storage site. I could probably find it in this report but some soil was removed and taken off to storage in metal drums.

**The Hon. LYNDA VOLTZ:** The department did that?

**Mrs FRANKLAND:** Yes.

**The Hon. RICK COLLESS:** Can you recall when the houses were knocked down, in the eighties some time?

**Mrs FRANKLAND:** I will see if I can find out in the report.

**Ms DAVEN:** They were knocked down in the late eighties, early nineties.

**Mrs FRANKLAND:** Even yesterday there was somebody walking up and down with a Geiger counter. That is the sort of state we are in now. I do not know where they were from. They could not say where they were from because it was a secret.

**The Hon. RICK COLLESS:** Did you ask them?

**Mrs FRANKLAND:** Yes, or one of the other ladies did.

**The Hon. RICK COLLESS:** What did they say?

**Mrs FRANKLAND:** They said, "We can't say." They looked professional. You invite people to your house and you have somebody walking up and down with a Geiger counter.

**Mrs CLARK:** Our neighbours our Italian and their family in Italy keep on ringing because it makes it into the Italian newspapers. My family New Zealand say that it has made it into the New Zealand Herald and we are thinking this is not a lot of fun. The last six months have been really bad for the residents. There is no discussion about the actual proposal to remove anything. It is stuck on all these other issues. We want to move forward and get it understood and gone.

**The Hon. CHARLIE LYNN:** Who do you think should do it?

**Mrs CLARK:** Most of it is confined on the Department of Health land—7 and 9, apart from these other smaller hot spots, so it is Department of Health responsibility.

**Mrs FRANKLAND:** They accepted responsibility back in 1977, as far as I am concerned on my land, when they said, "We will remove it at no expense to you." That has come up so many times and each time it gets to the sticking point of where will it go and then it stops again.

**The Hon. ROBERT BROWN:** Just to confirm again, that has never happened; they have never taken that hot spot off?

**Mrs FRANKLAND:** No.

**CHAIR:** Can any one of you confirm, given your history of the area and as a group, No. 11 was bought in 1980, and because of the risks from the contamination, my understanding is that between 1980 and 1989 the department allowed officers of the department to live in number 11 and then they sold it off to a private buyer after that. Can you explain the history of that process and what the awareness was?

**Mrs FRANKLAND:** There were three houses that the department was concerned about—5, 7 and 9. No. 7 belonged to the Conlons. I have quite a vivid memory of them being given almost no time to move. They had to move quickly because it was too dangerous. I remember discussions, whether or not they were factual, that the house would never be knocked down. What they wanted was to be able to move back into the area because they liked the area but unfortunately they did not get enough money so they had to move to Ryde, so that house was vacant. That was No. 7. The family that lived at No. 5 refused to move and eventually they bought or the government bought that and No. 11. The people from No. 5 moved into or bought from the department No. 11.

**The Hon. RICK COLLESS:** What were their names?

**Mrs FRANKLAND:** Kongats. They then bought No. 11 from the Government.

**The Hon. RICK COLLESS:** And when did they sell it?

**Mrs FRANKLAND:** To the new owners?

**The Hon. RICK COLLESS:** Yes. I am wondering when they sold it and why did they sell it?

**Mrs FRANKLAND:** The Government?

**The Hon. RICK COLLESS:** You said the Kongats bought No. 11.

**Mrs FRANKLAND:** Yes.

**Mrs CLARK:** Or were compensated for No. 11.

**Mrs FRANKLAND:** They sort of swapped a lot. I do not know if money exchanged hands. I am not too sure.

**Mrs CLARK:** They were in No. 5 and they went to No. 11.

**The Hon. RICK COLLESS:** So when did they sell No. 11?

**Mrs CLARK:** I have got notes from Kathie's mother here. No. 11 sold by Kongats in November 2001 to Peter and Michelle Vassiliou.

**Mrs FRANKLAND:** It's a big place—I do not know if you know it—it had been divided into two units. Mrs Kongats lived upstairs and they rented out the downstairs unit.

**Mrs CLARK:** Can I just add to that? These are notes from Kathie's mother that No. 11 was a vacant block and was bought by Graham Camp in 1968. In the late 1960s Graham removed the soil from the upper level and used it as fill in the waterfront land. He built some retaining walls and he knew about the soil problems well before anybody else. And he sold to Mary Gaudron and Ben Nurse in 1973 for \$67,000. They built a house and moved in in 1974; then they had two children. The Government resumed the house in 1980—the Nurses were divorcing. The block was supposedly cleared and later swapped/sold to Anthony and Lorraine Kongats, and then sold by the Kongats in November 2001.

**The Hon. LYNDA VOLTZ:** What are you reading from there?

**Mrs CLARK:** This is Kathie's mother who cannot be here today. Rosemary has lived there since 1965 in No. 15. Kathy and Rosemary owned 13 and 15. So they lived alongside No. 11 all these years.

**The Hon. LYNDA VOLTZ:** So she says in that that Graham Camp knew about—

**Mrs CLARK:** Yes, in the late 1960s. That would fit because it was in 1965 that the Conans were told.

**The Hon. LYNDA VOLTZ:** That is when the Department of Health did some testing on the site?

**Mrs CLARK:** Yes.

**The Hon. RICK COLLESS:** Kathie, do you think your mother would mind if that was tabled?

**Mrs FRANKLAND:** They are her recollections; she is not swearing that that is the absolute truth, if that makes sense.

**CHAIR:** Appreciating that, if we could have a copy? I think it could be valuable for our deliberations.

**The Hon. LYNDA VOLTZ:** Because she is not here we could keep it as a confidential document for the Committee rather than a public submission.

**CHAIR:** It is not confidential obviously because it has been read out and I think that is okay. But I think we should take it in the spirit that it is a written document by a resident and it is not something that has been sworn.

**Mrs FRANKLAND:** It was just her jottings.

**Mrs CLARK:** She has done notes on who lived in all of the houses in the streets and when—just what she has been able to piece together.

**CHAIR:** I have just received advice that if it were tabled as a submission we would need to get permission from her. Perhaps the secretariat could arrange that. If that is left with us we will get a copy and seek permission from her to have it tabled as a submission.

**Mrs FRANKLAND:** Because she did it for the residents group just so it was who lived in the street. Dates could be wrong.

**The Hon. LYNDA VOLTZ:** That is why I am wondering, if she wants, consideration could be given, if she has just done it as jottings.

**Mrs CLARK:** She has typed it all out to the best of her memory, and I think if it is taken in that spirit. She is trying to clarify the facts about who lived where and when. She has lived there the longest of anybody and I think she certainly put a lot of effort into getting this right.

**CHAIR:** We will contact her and she can make it clear whether she wants to keep it confidential or make it a public document.

**Ms DAVEN:** And there are the photographs from the press clippings too of the house on the Vassiliou's block here, which the press said that they built but it is pictured in the eighties.

**CHAIR:** We are not here to judge the accuracy of the press and we can only commiserate with her on her position. We take your point, but we are trying to get the history and an understanding, and seeing realistically—not from the press's perspective—what the community's requirements are. And of course we will be questioning the Department of Health and environment authorities later today. So this is all quite valuable for us to get a perspective on the whole thing.

**The Hon. ROBERT BROWN:** Ms Frankland, do you ever recall your parents or you doing gardening or working with the soil in those areas that are now shown as hot spots on No. 13?

**Mrs FRANKLAND:** I think when my parents first bought it that was sort of a scrubby bush area that had not been cleared and then over the years it was cleared and it was mainly a grass area.

**CHAIR:** Thank you very much for appearing today. If anything comes to light in your minds subsequent to this please contact the secretariat. I think a lot of the information has been very valuable and certainly appreciated by the Committee.

**Mrs FRANKLAND:** I have got this report on our block. Did you want a copy?

**CHAIR:** Yes. If you could leave that with the secretariat we will take a copy of it. Thank you very much for your attendance.

**(The witnesses withdrew)**

**NICHOLAS BRUNTON**, Solicitor, Henry Davis York, 44 Martin Place, Sydney, sworn and examined:

**CHAIR:** Welcome to the inquiry today. In what capacity are you appearing before the Committee? Are you appearing as an individual or as a representative of an organisation?

**Dr BRUNTON:** I am a representative of the owners of No. 11 Nelson Parade, Peter and Michelle Vassiliou.

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

**Dr BRUNTON:** I am.

**CHAIR:** If you should consider at any stage that certain evidence you wish to give or documents you may wish to tender should be heard or seen only by the Committee please indicate that fact and the Committee will consider your request. Would you like to make a statement to the Committee before we commence questions?

**Dr BRUNTON:** Firstly, I must congratulate all the honourable members for agreeing to commission this inquiry. It is a very substantive public health issue. I have prepared a very detailed submission for you, which includes all the documents that I have been able to obtain in the six months investigation on this. The document discovery process has been protracted, difficult and the Department of Health has, quite frankly, been less than cooperative. However, we have obtained a lot of historical reports and they are all there and included for your information. I trust most honourable members would have read the submission, or would you like me to just raise the key points in it?

**CHAIR:** I know we have had the submissions and we have read them—I must admit not all the mass of supporting documents: that is a bit beyond our ability in the short period of time available. But if you would like to just go through some of the main points in preparation for our questioning.

**Dr BRUNTON:** The key points in terms of land contamination are evident in the report, so I will not touch that. The land ownership is now largely well understood and the committee has heard evidence from the residents this morning. The key point that I would like to make is that no report has ever been issued by any external expert in relation to No. 11 saying that the property is safe. No expert external to the department has ever issued that report. In that regard I take the committee to document No. 13 in my list of annexures. That document comprises the Australian Nuclear Science and Technology Organisation report of February 2008. That is an important report, not because of what it says but because of what it does not say. It states that the survey made no attempt to assess occupancy factors—that is, how long a person would typically spend in the areas that were surveyed.

Therefore, it is not possible to make any estimate of actual radiation doses that would result from being in the area. It goes on to say that it does not assess potential doses from the inhalation of radon, which is a lung cancer causing radioactive gas formed as a result of the decay of radium. It also does not assess the potential exposure from the inhalation of radioactive dust or the ingestion of carbon particles, nor does it assess the actual level of contamination in the soil. This is the Department of Health's own report carefully identifying what it does not report on. Yet it is only the department that concludes the property is safe.

That relates to another document in my material—document No. 18—which is a letter sent to my client. I am sure that a similar letter was sent to many of the other property owners who were also surveyed back in February. The letter states that based on the Australian Nuclear Science and Technology Organisation report the department concludes that the property is within the Australian Radiation Protection and Nuclear Safety Agency guidelines. That is the department's interpretation—no-one else's. No expert external to the department says that this property is safe and falls within the Australian Radiation Protection and Nuclear Safety Agency guidelines. That is a key point because in our view there is no expertise precisely in this field within the Department of Health. That is the view of our consultant, and I urge the committee to ask him questions about that.

This is a very particular science and there are only a few organisations that are highly qualified to do this type of work. We commissioned a consultant because after the report was released, and given its limitations, there was not enough evidence to show that No. 11 was safe. We advised our clients that based on that

information they should not rent it out. We also advised that given the contamination their development application with the council could not progress. Therefore, the house has remained vacant since February of this year. The property now cannot be sold, lived in or rented out.

After receiving that report we commissioned Australian Radiation Services, which is identified through our research as the next most eminent consulting firms in this field. The other is Australian Nuclear Science and Technology Organisation. However, given it did the department's work we could not commission it. The report has been publicly released and it contains four key findings. First, 14 out of the 27 locations for background radiation are in fact above the level of clean-up criteria established by the department's own consultants for Nos 7 and 9. The Department of Health is proposing to remediate Nos 7 and 9, and it has established clean-up criteria. The technical measurement is 0.35 micrograys per hour.

**CHAIR:** That is gamma radiation.

**Dr BRUNTON:** Correct.

**CHAIR:** I am pleading here. I understand microSieverts are different. Can we relate them, because it very confusing. Perhaps you can compare it to the normal background radiation.

**Dr BRUNTON:** I will go back to the radiation science because it is confusing. It confused me when I was getting on top of it. You can measure background levels in a number of ways. According to our consultant the most accurate approach is to measure the absorbed dose rate "free in air". That is a different measure from a microSieverts per hour measure. It is an instantaneous rate. With a gigacounter you can measure something instantaneously. That gigacounter is designed to measure high levels of radiation and give you a quick, easy, cheap and convenient result. However, to measure background levels of radiation you need a totally different instrument. That is a key point. The type of instrument you need is an environmental detector, which is a much more sensitive type of instrument. That is what Australian Radiation Services has used.

One the key criticisms that the Department of Health will make later today will be that the background level that Australian Radiation Services has found is way too low and that its gigacounters detected a much higher level. That is because a gigacounter is not designed to measure very low levels of background radiation. It is simply the wrong instrument. I urge the committee to get on top of this technical with the experts tomorrow, particularly Professor Phillip Burns from the Australian Radiation Protection and Nuclear Safety Agency. I also urge the committee to ask Dr Joe Young about the type of instruments that should be used to measure background radiation.

They measured background radiation using a sensitive instrument designed for that purpose. They found it at 0.12 micrograys per hour. The Department of Environment and Climate Change has established clean-up criteria with GHD Pty Limited of 0.36 micrograys per hour, which is above the background of 0.12. Half of the No. 11 site is above GHD's and the Department of Health's suggested clean-up criteria. So it is four times the background level and half the site is way above their clean-up criteria.

**The Hon. ROBERT BROWN:** So you are talking about the testing under the house itself.

**Dr BRUNTON:** No, and that is very important. There were 27 locations sampled for this external gamma radiation and 14 out of those were above the clean-up criteria that the department is applying for Nos 7 and 9. That is just one indicator that there is a problem: it is four times the general background on average. It ranges from 2 or 10, but on average of the 27 samples it is about four times background levels and the range is from 2 to 10 times background level. That is just gamma radiation—the external stuff we experience even sitting in this room. That is just one pathway through which you can get sick from this site.

The second pathway is inhaling dust and gas from contaminated soils. If you kick a football in the backyard, the kids play in the sandpit, or you garden you are going to disturb the soil. The levels in the soil on No. 11 are up to 391 times normal background levels. It is massively contaminated. The department will say that we picked the known hotspot. Of course we did; we had to find out where the contamination was and how serious it was.

**CHAIR:** Do you have an idea of how that area is classified? Is that 391 times low, intermediate or high level radioactive material?

**Dr BRUNTON:** There are normal background levels of radiation in soil across Sydney.

**CHAIR:** I am thinking about removal and storage and the capacity to do that.

**Dr BRUNTON:** In terms of the volume of soil?

**CHAIR:** No, the radiation levels and the appropriate classification of that material.

**Dr BRUNTON:** It depends on the type of radioactive element. The normal background level of uranium 238 measured at Kelly's Bush was 24 plus or minus 8. On this site we found levels at 7,500. The thorium was undetectable at Kelly's Bush. We found levels at 9,200. We found radium, which is a highly dangerous element, levels of 23 at Kelly's Bush, but 9,000 at No. 11. Lead was 45 at Kelly's Bush, but 7,800 on No. 11. Radium 228, another related element, was 43 and our highest level was 210. Another breakdown daughter level of thorium was 44, our highest level was 232. In certain spots on this site there are astonishingly high levels of 9,200 compared to 23 for radium.

What parent would allow their kids to play in a backyard with soils at those levels? For the department to publicly say that this site is safe, when they have not tested the soil and they have not assessed the risk of ingesting dust from the soil, is astonishing.

**The Hon. RICK COLLESS:** Can I clarify a point? When you talk about soil samples, is that the mineral content in the soil?

**Dr BRUNTON:** No.

**The Hon. RICK COLLESS:** Or is that the radiation coming out of it?

**Dr BRUNTON:** It is the radionuclide content of the soil of the area, correct. The soil samples were done by hand-augered boreholes. They did bore down. They tested them in Melbourne and sent off a duplicate to New Zealand and these are the results that have been obtained in the Australian Radiation Service [ARA] report.

**The Hon. ROBERT BROWN:** How far down were the samples taken? Were they just surface soil?

**Dr BRUNTON:** They were taken at two depths, ranging from 20 centimetres to surface level, and then down to about a metre. They did not test everywhere because we had very limited time and they did not test very deep. It may well be that very deep there is more contamination. We just do not know.

**The Hon. ROBERT BROWN:** Were any of the test holes adjacent to the retaining wall, like the backside of the retaining wall?

**Dr BRUNTON:** I cannot answer that question. I am not sure. Earlier you raised a very important point about the risk of radiation or radioactive soils underneath the house. That has never been tested on No. 11. To identify whether it was a potential risk, we commissioned another consultancy to assess radon gas. Radon gas is given off by decayed radium in soil. It is a very toxic lung cancer causing gas. It can permeate through concrete. It is a brick and concrete house. So we have put radon detectors in the house for three months and we are going to issue a report in about two weeks, giving the result of these radon measurements. If that identifies high levels of radon gas in the house, then there is likely to be contaminated soil under the house.

**The Hon. ROBERT BROWN:** Are the radon detectors on both or all levels?

**Dr BRUNTON:** No. Only on the lower level.

**The Hon. ROBERT BROWN:** The lower or the pool deck level?

**Dr BRUNTON:** The pool deck level and the level above.

**The Hon. ROBERT BROWN:** The residential level?

**Dr BRUNTON:** Correct

**The Hon. HELEN WESTWOOD:** Dr Brunton, can I ask the reason for the choice of your site for the background testing at Kellys Bush?

**Dr BRUNTON:** It was chosen at random. Now, one of the criticisms that the Department of Health is going to make is that that is not a good-enough Sample. We took one elsewhere. To head off this issue, on Tuesday we commissioned a consultant to go and do a comprehensive survey of background in all areas of bushland that we could find similar to natural bushland in Hunters Hill. Dr Young will send out a supplementary report tomorrow identifying the results of the survey. He advised me this morning that the results confirm that the background level is around what they found in their original report—around 0.12 micron grades an hour. They have taken four instruments, or three or four instruments, to check that background level and they have also taken the same instrument that the Department of Health consultant, the Australian Nuclear Science and Technology Organisation [ANSTO], used in February and compared the results. I encourage you to ask questions of Dr Young to find out what instrument records what and why he prefers one instrument compared to the instrument used by the Australian Nuclear Science and Technology Organisation.

**CHAIR:** Does this explain the person walking along the street yesterday with Geiger counter equipment?

**Dr BRUNTON:** It would have been Tuesday.

**The Hon. ROBERT BROWN:** The background checking was done in virgin bush.

**Dr BRUNTON:** Correct.

**The Hon. ROBERT BROWN:** Again I know nothing about this, but I am told that anywhere where there is a built environment, with bricks and concrete materials, there will be increased levels in some of these sorts of products.

**Dr BRUNTON:** That is right. You can get radiation from things like granite and different types of rocks. Any man-made material can give off levels.

**The Hon. ROBERT BROWN:** Were any background checks taken in the built environment outside of this area, such as other residential areas where there were built houses and offices?

**Dr BRUNTON:** It is a question you should ask Dr Young. I understand that the supplementary report surveyed background levels in natural bushland to find out for Hunters Hill what is natural bushland. They also tested one or two residential sites and also tested along Nelson Parade and found some high levels—incidentally, along the road surface along Nelson Parade.

**The Hon. ROBERT BROWN:** Your consultants just did their background checks in Kellys Bush?

**Dr BRUNTON:** Kellys Bush and a number of other bushland areas—

**The Hon. ROBERT BROWN:** Oh, bushland areas.

**Dr BRUNTON:** —around Hunters Hill. There are about three or four sites, plus on a couple street corners, residential areas and also on Nelson Parade.

**The Hon. ROBERT BROWN:** So you did do residential areas.

**The Hon. RICK COLLESS:** Were they just aerial tests, or did you do soils?

**CHAIR:** Just a moment.

**The Hon. HELEN WESTWOOD:** That was the question I was going to ask. Why did you not have a background site that was also built upon that was in a similar urban environment to the other homes in Nelson Parade?



**Dr BRUNTON:** Okay. Usually to measure environmental background levels, you go to a natural area because if you have introduced urban form—buildings and houses—that can increase your background levels. It is very minute, but it can increase it, depending on the material that you would use. Road base, bricks, mortar—they all contain a small element of radioactive material.

**The Hon. RICK COLLESS:** That is what we need to know, I think, do we not?

**The Hon. HELEN WESTWOOD:** I thought the purpose was to ascertain whether or not the contamination was out of the ordinary for a site of that kind. Would you not use a site of a similar kind with similar buildings to get the background testing and do those comparisons?

**Dr BRUNTON:** Well, you could do that. Apparently it is a very technical question. I am just a mere environmental lawyer. You perhaps should ask Dr Young what is best to compare, but my understanding is you check background levels and the environment. You can do that in any number of locations. I think they also checked the parkland, street corners, and they also did a check on natural bushland areas. It is perhaps a technical question that ought to be directed to the experts.

**The Hon. HELEN WESTWOOD:** Would the company that did your testing be aware of the history of the site that Kellys Bush is on? We have heard that it was formerly an industrial site. Are they aware of that activity and any remediation that took place?

**Dr BRUNTON:** No, they were not at the time, and that was one of the reasons that we decided to do more background checking—just to make sure that the reading that they obtained is accurate. It is a very valid point that you raise. If it was affected by tin smelting, perhaps, even that reading is elevated. But the fact is that the readings are quite low where they took the sample and it has been confirmed by the other sampling around the Hunters Hill area, in the natural areas of bushland. So they are very confident, and we are absolutely confident, of the integrity of the science conducted by Australian Radiation Services. They expressed unequivocally to us that the methodology adopted by the Australian Nuclear Science and Technology Organisation, in terms of measuring background, is not sound.

The Geiger counter measurements in terms of measuring the actual instantaneous rate are okay and they are fairly comparable with levels of gamma radiation on the site, but it is important to establish what the correct background is. And you understand the reason why I say that: It is because the Australian Radiation Protection and Nuclear Safety Agency [ARPANSA] says that you have a safe level and it is also reflected in the New South Wales radiation control regulation. It is 1 millisievert above background. So the first question is: What is background? What are the actual levels on the site? If they are 1 millisievert above background, you have a problem. That is the guideline you use, that is in the New South Wales radiation control regulations, and that is the starting point when you look at sites: Are you more than 1 millisievert above background?

The work by Australian Radiation Services has concluded that on No. 11 the range is 0.7 to 2.5 millisieverts above background. On that measure, it is a major problem. It is critically important to get the right background, and they have done further work to confirm that that result is correct. Finally, I would just like to raise a couple of points. The Department of Health appears to be saying that the property is safe. They also appear to be saying that they disclosed the contamination that was on No. 11 when they sold it to the Kongats in 1989. If I can tender a press release issued by the Department of Health—I have eight copies for you—the department states: "The fact that the property was affected by radioactive deposits was identified in the sale documents at that time." That is in 1989.

**Document tabled.**

**The Hon. LYNDA VOLTZ:** I need some clarification going back to the background report. You got your guys to do testing on Tuesday and you used a number of sites. You used virgin bushland.

**Dr BRUNTON:** Correct.

**The Hon. LYNDA VOLTZ:** You used built environment with roads.

**Dr BRUNTON:** Correct.

**Dr BRUNTON:** Correct.

**The Hon. LYNDA VOLTZ:** What was the difference in the readings?

**Dr BRUNTON:** I do not have the results, they are being written as we speak. That report will be tendered to the Committee tomorrow. I am advised orally that the background levels are consistent with the findings of the ARS report, that is in the tendered material.

**The Hon. LYNDA VOLTZ:** You did only one virgin site in the first one?

**Dr BRUNTON:** In the original report, that is correct.

**The Hon. LYNDA VOLTZ:** You would expect that they cannot be consistent if one has a built-up environment and one is a virgin site?

**Dr BRUNTON:** I cannot comment. I have not seen documented results. The consultant instructs me that the background levels that have been surveyed are consistent with what they found originally in Kellys Bush.

**The Hon. HELEN WESTWOOD:** Can you clarify whether the company that you are using were challenging ANSTO's method? Did they think that ANSTO does not have expertise and experience in this very technical field? If they believe that ANSTO does not have the capacity or ability, whose method do they support? What other experts do we have?

**Dr BRUNTON:** They are not criticising ANSTO as an organisation. They understand that there is an error in the assessment background levels, or the radiation, because of the instrument that was used by ANSTO to measure background. As I said, it is critical that we establish the correct background. Our consultants are absolutely committed to their work and they have offered to take the Committee on a site inspection next week, if the Committee would want that, and repeat all the measurements; and also invite ANSTO have their scientists there to confirm all the measurements. That is how convinced they are of their methodology and the work that they have done.

They would be more than happy to go next week with the Committee members and redo all the testing. It will take a day or two, but they are more than happy, and our client would pay our consultants' costs to redo the work. They are that convinced of the methodology. ANSTO are more than welcome to come along to compare the same results using our instruments compared to their instruments. That is how sure they are of the work.

**The Hon. LYNDA VOLTZ:** Are you talking about milligrams?

**Dr BRUNTON:** There are a number of units and measurements. Our consultant uses one called micrograys per hour. The clean-up criterion is .35. The background level is around .12.

**The Hon. LYNDA VOLTZ:** The clean-up is 0.35, is that above background?

**Dr BRUNTON:** Correct.

**The Hon. LYNDA VOLTZ:** Your assessment of background is .12?

**Dr BRUNTON:** Correct.

**The Hon. LYNDA VOLTZ:** What is the department's assessment of background?

**Dr BRUNTON:** They use a different measurement; they use a different instrument. They measure in microSieverts per hour.

**The Hon. LYNDA VOLTZ:** What was the microsievert measurement?

**Dr BRUNTON:** The department's results?

**CHAIR:** I understand it is different equipment: it would give a different reading.

**The Hon. LYNDA VOLTZ:** I understand that.

**Dr BRUNTON:** There is a factor to compare the two measurements. I am talking technical science and therefore it is probably best to speak to the experts.

**The Hon. LYNDA VOLTZ:** Do you not recall the microsieverts reading?

**Dr BRUNTON:** In the department's work?

**The Hon. LYNDA VOLTZ:** Yes.

**Dr BRUNTON:** I can give you those results. Do you want the actual levels on the property?

**The Hon. LYNDA VOLTZ:** Have you done the conversion?

**Dr BRUNTON:** Yes. Our consultants compared the results.

**CHAIR:** Perhaps you can table further information to explain that situation.

**Dr BRUNTON:** Dr Young will table his supplementary report tomorrow.

**The Hon. CHARLIE LYNN:** I have a copy of a media release dated 25 June 2008, from the NSW Department of Health, which says that No. 11 was subsequently resold to the current owners in 2001, but the department does not have information about that transaction as it was not a party to the sale. The previous paragraph in the media release states that No. 11 was sold by the NSW Department of Health to private owners in 1989 and the fact that the property was affected by radioactive deposits was identified in the sale documents at the time.

**Dr BRUNTON:** The point I want to make about that, Mr Lynn, is that barely two months after they sold the property to the Kongats the Department of Health wrote to the council—and I have the letter in front of me, and it is in my annexure—and said that following removal of affected soil from the subject property, No. 11, the department issued a clear certificate under the provisions of section 55 of the Public Health Act, which indicates the property is considered clear of contamination, and attached a copy. On the one hand the department said it told the Kongats that the property was affected by soil, yet two months later it wrote to the council and said it is clear of contamination. The council, relying on that letter, put nothing in the 149 certificate on No. 11 thereafter.

When our client bought it in 2001 and made inquiries of the department, nothing obtained. The 149 certificate discloses nothing, therefore they think they have a clear property. Lo and behold, 400 times background in soil, average levels of background, four times the levels that are elsewhere. It is a disaster. They cannot rent it; they cannot live in it; they cannot sell it.

**The Hon. ROBERT BROWN:** When would the results of the radon gas detection devices be available?

**Dr BRUNTON:** About two weeks. We are more than happy to tender that to the Committee. It is an important piece of work. Finally, I make the point about what should happen on Nelson Parade and our client's view. We completely agree with residents: this whole area does need some further detailed testing to identify the extent of the contamination. We have known for many years that No. 13 is affected and many other residents have complained. I have been contacted, but I cannot disclose by whom, about another property suspected as being affected. One father has died of cancer, mother is suffering from cancer at the moment. There are concerns out there. Once all the areas have been properly identified, remediation should happen altogether, once and for all. That includes Nos. 7, 9, 11 the hot spot on 13 and anything else that is found. That should happen all at once so the residents can finally live in a street that is safe.

**The Hon. RICK COLLESS:** That property, and I understand that you cannot tell us where it is, but suffice it to say it is not 7, 9, 11 or 13?

**Dr BRUNTON:** No, but it is on the other side, not far away at all.

**The Hon. RICK COLLESS:** On the high side?

**Dr BRUNTON:** Yes.

**The Hon. ROBERT BROWN:** Are you suggesting that testing done on all other sites, generally speaking, should be similar to the testing that your consultants have carried out on No. 11 soil sampling, et cetera?

**Dr BRUNTON:** Soil sampling, radon gas and background levels.

**CHAIR:** You have satisfied the Committee's questions at the moment. I appreciate that you have more material to be submitted as soon as possible. Thank you for your appearance today.

**(The witness withdrew)**

**(Short adjournment)**

**SUSAN RUTH HOOPMANN,** Mayor, Hunters Hill council, 1 Brookes Street, Hunters Hill, and

**BARRY RONALD SMITH,** General Manager, Hunters Hill council, PO Box 21, Hunters Hill, sworn and examined:

**CHAIR:** In what capacity are you appearing before the Committee—as an individual or a representative of an organisation?

**Ms HOOPMANN:** As mayor of Hunters Hill council.

**Mr SMITH:** As General Manager of Hunters Hill council.

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

**Ms HOOPMANN:** I am.

**Mr SMITH:** Yes, I am.

**CHAIR:** If you should consider at any stage that certain evidence you wish to give or documents you wish to tender should be heard or seen only by the Committee, please indicate that fact and we will consider your request.

**Ms HOOPMANN:** Thank you.

**CHAIR:** Would either of you like to make an opening statement?

**Ms HOOPMANN:** Mr Smith has been doing the research for hours and hours and hours so he is probably the one who should give you the information first.

**Mr SMITH:** We have made a fairly detailed submission to the Committee.

**CHAIR:** Yes, and we have that.

**Mr SMITH:** Basically, what I have tried to do is just to go through the five terms of reference and come up with a recommendation in respect of each of those areas. You will find that in A, B and C the recommendation is essentially the same, and that is that each of these sites needs to be retested. I would like to table two documents. I have taken the submission and redone it and just done a chronology of what has happened from the time something happened on this land up until today. It will give you a good summary and you will be able to get your head around it fairly quickly. The other is to provide to you in a slightly larger form a copy of the map referred to in my submission and probably in other submissions, which is the map prepared

by Sinclair Knight and Partners [SKP] as part of a study that they undertook for the Department of Health in 1987, identifying all of the radioactive sites and contaminated material.

The Australian Nuclear Science and Technology Organisation [ANSTO] conducted that study. They were subcontracted by SKP to undertake this study. What we are suggesting in a submission is that ANSTO should be required to go back and simply in the first instance redraw that study and update all of its material; secondly, to also include in that study numbers 5, 11 and 13—essentially, this study was for 7 and 9 only. If you look at the map you will see that interestingly the study results stop at the property boundary between 9 and 11. I cannot really understand how the material stops at the property boundary. Call me a cynic but the reality of it is that it simply cannot. If anyone had had the opportunity to see some of the television footage last week or the week before of Australian Radiation Services people doing the testing, they were in fact testing at No. 11 exactly in one of the places where the boundary is and they are doing it on 11, not 9. I think that is extremely interesting.

When Egis did its report for Health in 1999 what they were asked to do by Health—and this is in the potted chronology—was to review everything that had happened in the past and basically bring it up to date and create a new baseline. The fundamental problem they had in that report is that when they went to look for the files to look at the paper records for all the data on all of those lots they could not be found. So in 1999 they could find no paper records of the remediation or removal of material prior to that date.

**CHAIR:** You are referring there to the Department of Health?

**Mr SMITH:** They went to the Department of Health, radiation branch, to find those files. They could not find those files. To me that means there is no verifiable baseline of data. You cannot make good decisions without good sound data.

**CHAIR:** Do you have years for that?

**Mr SMITH:** The Egis report was in 1999 and they went back over all the reports that were done prior to that time to try to piece the whole thing together. Somebody had obviously twiggged and if you look at the chronology it will tell you that. All of a sudden at one particular point in time the Government is going to buy some sites and remove 3,000 cubic metres of material. They could not find anywhere to take it so they wanted another solution. In 1997 Sinclair Knight did a study. Public Works come up with a solution, which was to build four concrete silos on the foreshore and put 930 cubic metres of material in there. How did we go from 3,000 to 930? That solution obviously did not get up. The answer was to acquire three blocks of land so they acquired 7, 9 and 11, the idea being to remove the material from 11 on to 7 and 9 and cap it. On the basis of a Cabinet minute they removed three or four cubic metres of material. We have gone from 3,000 to three or four. What is going on?

Then there is a record of another three drums of material being removed from No. 5 and taken to Lidcombe storage facility. Egis tried to locate the three drums, or any record of the three drums: can't find them. What was it? Where did it come from? Where did it go? Nobody knows. This to me, there is just a litany of misinterpretation, misinformation, and to me it shows a complete breakdown in corporate knowledge leading to where we are today. To me it was very clear that the sites must be retested. People from No. 11 obviously felt there was a problem. An additional study was done and quite clearly all that study was ever meant to do by Michael Richardson, MP, was to indicate that there was a problem and the site should be tested.

Council considered that and I put a report to council. A resolution was to write to Health and DECC and say "Please retest the sites". Their response very clearly was to ask ANSTO to discredit the Geiger counter solution. They did not retest the sites. When ANSTO was questioned on that—it appears in an article in the *Sydney Morning Herald*—"We weren't asked to do any soil testing or sampling, we were only asked to offer a critique on the Geiger counter test".

**CHAIR:** What year was that?

**Mr SMITH:** That was a couple of months ago. To me this is about risk management. This is a real risk management issue for the State, council and more particularly the residents who now have no certainty of what is on those sites, or any adjoining sites. The whole thing has grown like Topsy and no-one really knows. No-one can really know because the data simply is not there. Now if you look at when that study was done in 1987, my understanding is that—and I will say this first up—there is no such thing as a safe level of radiation. The

accepted world standard is that there is no safe level of radiation. If there is to be some measure, it is Dr Brutton said earlier, one CD above background. When these tests were done, and when these sites were remediated the original time that level was five. So if today's standard were one, one would expect that those sites are well and truly above one and therefore must be remediated.

Certainly to be fair to Health that was the process that has been started with council about four times so far, and fallen over for reasons unknown to us, generally we expect it was because the cost was too great to do it or they couldn't find the appropriate solutions, don't know. The last time we started the process was towards the end of 2007 and then all of this blew up from there. Obviously our concern is now that we have additional information, particularly the information from ARS where we would have accepted, and did accept, the information being provided to us from DECC and the Department of Health, we took their word of it, as you would. We had section 55 certificates saying these lands were clear. I am sorry, as the general manager for council and a person who is heavily involved in risk management—you may or may not know, certainly all my local government people would know—councils cannot buy any public liability or professional indemnity insurance in Australia. We buy all of our insurance direct from London.

We have had to, and have become very good risk managers. I am putting my risk manager's hat on for council and saying "I don't want to go anywhere near these sites. I will be reporting this to our insurers in London because I am extremely concerned about what impact there might be for our community and the council. To me there is one really fundamental logical thing to do: first off find what the baselines are. Find out which sites are affected. Find out the levels of difficulty on each of those sites. Then do a new risk assessment and based on that risk assessment then do a new remediation plan. That is what must happen as a basic, fundamental pragmatic risk management approach to this problem. I cannot understand why people who are paid to do this work: they have the expertise—I don't have it—but to me blind Freddy would think that that is what he has to do. Any responsible senior bureaucrat or Minister would require that to be done. I think this whole thing at the moment in its present form, how it is being handled, is exactly that: it is being handled; it is not being managed.

Health's concern, I am sure would be, well hang on we have got these couple of fantastic waterfront blocks of land at Hunters Hill, worth lots of money, that should offset the cost of remediation. I don't care whether it does or not, that is not the issue. It must be done irrespective of the cost. Who would want to buy them anyway? But it is reasonable for them to be able to sell them and some defray some of that cost, not make money out of it. We are playing with people's lives here. I have residents ringing me and saying "What's the council going to do about this?" "My friends won't let their kids come and play with my kids because they are worried they are going to get radiation poisoning." What do I say? "Don't worry about it". I am not prepared to say that. What I say to people is "If you are concerned perhaps you should go and get your own testing." It is not for the council to put the ratepayers to the expense of doing its own independent testing. I think enough independent testing has been done already by Australian Radiation Services to indicate that there is a problem here and it needs to be rectified. I suspect Dr Young and ANSTO are on very good terms. I don't know. Did Dr Young used to work for ANSTO? It wouldn't surprise me. It is a very specialised field. There are not many people who know how to do these things.

When the doubt was cast about what might or might not be on the site, I am a pretty pragmatic and forensic sort of person, so I went back and start to look at files and records and reports that I hadn't worried about too much before because I took DECC and the EPA at their word. Interestingly, if you go back and you look at the Gavin Mudd report which may or may not have been mentioned to you, but I mentioned it in my submission and I think Gavin Mudd is actually in the gallery here today and I think he has made his own submission and included a copy of that paper with his submission I think I am correct in saying. I would comment that submission to you because it identifies that this problem has been known and well documented since the early 1970s, if not before. What really is a significant concern is that in a report done by Scott, referred to in the Mudd article, the material on this site, because of its nature, the radium extracted from the uranium, that the parent material not being removed—I am not a technical person, I am only paraphrasing what's in these documents—in fact, radiation levels over time will increase not decrease.

That statement is supported by Egis in the 1999 report. Interestingly, one of the conditions of consent that the council put on No. 11, following its sale by Health to another party and that sale involved Health buying No. 7—so they got No. 11 in exchange for No. 7 plus \$25,000—they then lodged an application for alterations and additions to No. 11. The council placed a condition of consent on that application to provide a certificate to say the site was free of radioactive material because the council of the day had been trying to find out that information and couldn't get anything. Of course, the sale would have fallen through. Next thing you go and its

what Dr Button talked about, and I have given him a letter confirming this, up pops the section 55 certificate from the Department of Health to say the land is free and clear.

In its conditions of consent the council required the site to be monitored every five years. In 1995 the council wrote to the Environment Protection Authority and said, "We do not seem to have had any records of monitoring provided to us. Can you tell us when it was last monitored and give us a copy of the last report." The response was, "It hasn't been monitored lately, but anyway, the nature of the material does not change, so therefore monitoring is not required." Excuse my French but horse manure. Our other experts are very clearly saying that is not correct. I do not know who is correct; I am not a scientist but that tells me there is a problem because we have two different answers. How do we do it? We go back, we do the tests again and we get the new baselines. We work out the risks of that and then we work it out and that is the way we should do it. That is essentially what I had said in about 28 pages in the submission. I think I have probably said enough.

**CHAIR:** Councillor Hoopman, would you like to add to that?

**Ms HOOPMANN:** Yes. There is a lot of information in that submission but as a councillor and as a resident of over 30 years in Hunters Hill, we all know that this problem has gone on for a long, long time. As a responsible person, all I can say is it needs to be fixed. The residents have already spoken to you about that. I would go further than what they ask and say that the whole street, the lower side and other side, should be tested because of the stigma that is now around that area. That is the only way that can be removed. We are talking about more than real estate values. We are talking about life. We need to have it done and the sooner the better, as far as I can see.

**CHAIR:** We visited the site earlier this week and saw no signage. Do you have a position on that or does the council have anything to do with that?

**Ms HOOPMANN:** About the contamination?

**CHAIR:** About the fact that they are to some degree—and no doubt we will get to that eventually—contaminated yet there is no signage and nothing to stop kids, et cetera walking across that property?

**Mr SMITH:** The condition of consent that the council placed on the development application when they remediated 7 and 9 required them to fence the property from the foreshore to the front boundary and across the front boundary. The fence along the side boundary was to be chain wire 1.5 metres high and I think that is generally what is there. Across the front it was to be a pool-type fence 1.8 metres high, and that is essentially what is there. There is supposed to be some appropriate signage placed on that fence. They were the conditions of consent.

They were the conditions of consent and my view is they have breached the conditions of consent. I believe they are still in breach of the consent conditions from 1989 because when they wrote back to the council and said, "We do not think it needs to be monitored anymore" the officer dealing with it at the time did not respond to that letter; the matter was not reported to council, therefore, as far as I am concerned, that condition of consent still stands. As of next week I will be writing and taking legal action against the Department of Health because they are in breach of the consent and I want the sites monitored and tested. So if it does not come out of here, it is going to come out of council.

**CHAIR:** In terms of movement of soil from lots 7 and 9, is council aware of any permission sought to move or have there been any movement of soil the council is aware of or any other deposition on any other sites in the area?

**Mr SMITH:** No.

**CHAIR:** You did say that you would like to see both sides of the road properly checked out? From your perspective is there any possibility of any other sites in the area that may have fill or any permission to fill under retaining walls or anything at all that might have been carried out in the past?

**Mr SMITH:** The best I could find, and again because files relating to those properties cannot be found, we have no historical records from Health about that and unfortunately the council burnt down in 1978 so council is no paper records pre-1978, therefore, I can only go on information I can find from other sources. In

that respect principally the report that I relied on is the report done by Gavin Mud. On the first page of that chronology certain things happened in the early sixties. A decision was made to turn those lands into residential lands. I do not know if you have a submission from Graham Camp or whether he has appeared, but Mr Camp in fact acquired lot 11 from, I assume, it was the Sydney Smelting Co. or whoever owned the land at that time, because Health did not buy it until later on. From his information to me on-site last week, he was the one who in fact basically recontoured No. 11. He quarried it out, removed the sandstone, created the terraces and pushed all the material all over the place. It was acknowledged that it was radioactive. It is a very interesting story. People turned up one day and stuck a white patch on his shoulder. He said, "What's that for?" They said, "If it changes colour it's radioactive, so you had better be careful." It is just bizarre.

**CHAIR:** Roughly when would that have been?

**Mr SMITH:** That was in 1963 or 1964.

**CHAIR:** It must be realised that was not there in the same capacity back in those days.

**Mr SMITH:** Things were said but that is when material was moved around. He said material was moved across 7 and 9 as part of turning those lots into developable blocks of land. The next significant movements of material we are aware of was when Health bought the land. Obviously some testing was done. Something occurred in the late seventies, which led to the Government intervening. That was when there was talk about removing the 3,000 tonnes of material, which ended up being three or four cubic metres moved from, I gather, 5 and 11 on to 7 and 9, and then some other smaller amounts from there.

Other than that I am not aware of any major movements, except when people have perhaps built—7 or 9, nothing has happened because the houses were demolished; 11 was obviously already there and has had significant alterations and additions; 15, I think, has been there for quite some time. Mrs Frankland will be able to tell you that and 13 was constructed in 2001, so up until 2001 No. 13 was vacant. No. 13 has been missed out a little in all this because there is not a lot a reference to that and it is not until I talked to Mrs Frankland that she provided me with copies of letters between herself and her father and the Department of Health that the radiation, a spot—how big is a spot; how long is a piece of string—is identified on number 13 and that is why we suggest that No. 13 also needs to be included in any further testing.

I am also aware that a resident at No. 20-something—I will not disclose the number—was recently required by his financier to provide a clear certificate before they would lend them the money to do their alterations. As the mayor said and I think previous speakers have said, this is affecting other people who may or may not be directly linked to these sites and I think that is why the testing has to be on a broader basis. It may not need to be the same depth of detail as Nos 5, 7, 9, 11 and 13, but there needs to be at least some level of testing. I am getting calls from people two or three streets away wanting to know what is the effect on them. That is more from the Radon gas and I think we would all be very interested to find out what the results of the Radon gas tests that are currently being undertaken on No. 11

**CHAIR:** Is that the first time that Radon gas has been done?

**Mr SMITH:** No, the tests have been done previously, but again there is clear evidence that over time this material can actually increase not decrease and that is the real worry, and because we do not have the baseline data—although I suspect that even though the 1987 report could not be found at the Department of Health, I would be interested to know whether ANSTO, which did the 1987 report, still has a copy in its records.

**The Hon. RICK COLLESS:** Did the council give approval for the demolition of the properties on 7 and 9?

**Mr SMITH:** Yes.

**The Hon. RICK COLLESS:** What happened to the building materials that came from 7 and 9?

**Mr SMITH:** I have no idea.

**The Hon. RICK COLLESS:** Where those materials had to go was not part of the approval?



**Mr SMITH:** I would have to check the files for sure. I have not looked at that, so I could not tell you for sure.

**The Hon. RICK COLLESS:** We were told when we inspected No. 11 on Monday that the mortar that was used in the building on lot 7 was in fact made from radioactive sand on site and the radon gas was permeating the whole building and that was the reason that one was pulled down immediately.

**Mr SMITH:** I would not doubt that.

**The Hon. RICK COLLESS:** I am wondering what has happened to that material. Where is it now?

**Mr SMITH:** I suspect it is dispersed over 7 and 9.

**The Hon. RICK COLLESS:** But it would have been in the bricks as well.

**Mr SMITH:** My understanding is that when they remediated 7 and 9 they effectively simply just shovelled everything around the site and brought clean material in and capped it.

**The Hon. HELEN WESTWOOD:** Was a remediation plan submitted as part of the development application with those sites?

**Mr SMITH:** I do not know. Again, that could have been before the fire in 1978 so I will not have the records for that. But it is not something that I have seen.

**The Hon. LYNDA VOLTZ:** Seven and 9 were not demolished until the nineties, were they not?

**The Hon. RICK COLLESS:** Late eighties I think—at least.

**The Hon. LYNDA VOLTZ:** Late eighties, early nineties.

**Ms HOOPMANN:** It was earlier than the nineties. I do not remember.

**Mr SMITH:** 1987.

**The Hon. LYNDA VOLTZ:** So there may be a remediation plan available?

**Mr SMITH:** Maybe.

**CHAIR:** That would be a remediation plan with council?

**Mr SMITH:** In those days they may not have had to submit them.

**The Hon. RICK COLLESS:** Your records here show that in 1987 the proposal was to demolish 7 and 9. So it would have been the very late eighties.

**Mr SMITH:** Yes. They may not have had to provide that sort of information to us at the time, and the rules have changed. It was before my time; the rules have changed since then.

**The Hon. HELEN WESTWOOD:** I am wondering whether we could get some clarification around the approval of any of the works on those sites that may assist us in understanding whether or not contaminated soil was removed and, if so, was there any indication of where it may have been taken to. I think that would certainly help us in getting a clearer picture for our purposes.

**The Hon. RICK COLLESS:** Just to add to that. What Helen has raised there is very important. I would also like to see included in that where the building materials that came from those houses went to. Could you find out that information for us?

**The Hon. LYNDA VOLTZ:** When you originally spoke about three or four drums being removed and you not knowing where they went to, we had evidence earlier that some drums were removed and you suggested Lidcombe was the site that they went to.

**Mr SMITH:** The records I have indicate that.

**The Hon. LYNDA VOLTZ:** So the likely place would have been Lidcombe Hospital, which had a nuclear health unit?

**Mr SMITH:** That would be my guess.

**The Hon. LYNDA VOLTZ:** And possibly those records, because Lidcombe Hospital no longer exists?

**Mr SMITH:** Possible. They could not find the drums.

**The Hon. HELEN WESTWOOD:** It could have been the hazardous waste facility at Lidcombe.

**Mr SMITH:** I can probably find that out.

**The Hon. HELEN WESTWOOD:** It is worth having a look at because both of those facilities are in that area.

**The Hon. LYNDA VOLTZ:** You say that over a period of time the Department of Health has identified that remediation needs to happen on this site and there has been an issue about the soil. Has Health actually contacted you at all about any difficulties in removing soil from the site, and was that part of the reason it has been placed on 7 and 9?

**Mr SMITH:** No. If you look at the chronology: in 1987 the solution the Department of Works came up with at the time to fix the problem was to build these four concrete silos and put 930 cubic metres of material into the concrete silos. That obviously did not sit well with somebody because it did not happen. The next plan then was to move the materials from the other sites, put it onto 7 and 9 and cap it. That was the way they dealt with it.

**The Hon. LYNDA VOLTZ:** The open space level that is acceptable as opposed to the residential level, what is the council's standard on what is the acceptable level? Taking into consideration the background—ignoring what the background levels may be—what is the acceptable level?

**Mr SMITH:** We would go with the ARPANSA standard, which is 1.

**The Hon. LYNDA VOLTZ:** So the ARPANSA is what you go for?

**Mr SMITH:** Absolutely. From a risk management point of view I could not see that you would accept anything else.

**The Hon. ROBERT BROWN:** A point of clarification? So the ARPANSA does not differentiate between open space use and residential use?

**Mr SMITH:** I do not believe so, but I could check it.

**The Hon. LYNDA VOLTZ:** This was the Department of Environment, was it?

**Mr SMITH:** No. Sinclair Knight and Partners did this study for the Department of Health.

**The Hon. LYNDA VOLTZ:** And you had concerns that the radiation appeared to stop at the border?

**Mr SMITH:** If you look at that map, if you look at the boundary between 9 and 11 and you look at where they have drawn it—you will have to excuse me here because I am red-green colourblind, so this could be red, pink, grey or some other colour, I am not sure—

**The Hon. LYNDA VOLTZ:** My only question was on your scepticism on it. In No. 11 it obviously crosses over at the border and down further it appears to end at the border, or the levels are very low there—there is a slight pinkish colour. At No. 11 the ground is fairly level at one level there across both borders; when you move further down the site there are very high retaining walls between No. 11 and No. 9, and in fact No. 11

is much higher up than No. 9, which is low with a very thick retaining wall built there. That might actually explain why it appears to end at the border: all the radiation levels are low.

**Mr SMITH:** The reason I say that is because Mr Camp constructed those retaining walls and the material placed behind those retaining walls generally came from those three sites. That is what he has told me. My query is, for argument's sake, just looking at that spot there on the map, you have a depiction of the region or whatever, and it just stops there. Notwithstanding it might be at a different level, the ground does not stop; it still goes across there.

**The Hon. LYNDA VOLTZ:** But the ground does stop in terms of the height on the other side. If you have got a big drop and then you have got a kind of cover that is six to eight feet of soil and you are doing a reading of six to eight feet of soil you are not going to get the same reading on the other side six to eight feet down without the soil capping, are you?

**Mr SMITH:** That would depend on where the soil came from, would it not?

**The Hon. LYNDA VOLTZ:** But taking into consideration that I thought you said in 1987 the soil was removed from No. 11 and put onto No. 9.

**Mr SMITH:** Three or four cubic metres were taken from No. 11 to put on No. 9.

**The Hon. LYNDA VOLTZ:** I thought three to four cubic metres were removed from the site?

**Mr SMITH:** Yes, that is all. The original proposal was to remove 3,000—that never happened. Then the proposal was to remove 950—that never happened. What happened is that three or four cubic metres were removed, that is all.

**CHAIR:** Mr Smith, just for my edification, I interpreted the radiation that was on a map that was given to me on Monday as potentially just trespassing, if you like, the radiation itself. But as I understand what Ms Voltz is saying, we do not have substantiated where that fill actually came from unless you know where the fill on 11—which is above the wall in a flat area obviously filled—came from. Do you know where that material actually came from?

**Mr SMITH:** According to Graham Camp it came from both on the site—because he was doing the quarrying on the site, on 11, and using that, and he was taking it from 7 and 9.

**The Hon. LYNDA VOLTZ:** But have there not been renovations at the back of No. 11 more recently?

**Mr SMITH:** Yes, but that would not have any impact on the terraces. According to Camp, the terraces are still as he constructed them.

**CHAIR:** That is quite lower than the swimming pool rooms. On the next level down there is a flat area and Mr Camp had filled in that area behind the retaining wall and he has said that he has got the fill from both on-site and also next door.

**Mr SMITH:** Yes, that is what he said. All I am saying is, the reality is does it really matter? If it is retested then we will know.

**The Hon. LYNDA VOLTZ:** I do not think there is an issue about retesting and remediation. What I am wondering is why you are surprised about those results when, if you look at the site, there is probably a very logical explanation for it. I do not think it is a big point. Do you know if there has been identified if the soil was removed where it could be removed to?

**Mr SMITH:** No. Again, I believe that that is what EGIS was trying to identify in 1999 when it went looking for the reports to understand where the material was removed from and where it was placed. They are the records that cannot be found.

**The Hon. LYNDA VOLTZ:** Did the Department of Health or the Department of Environment and Climate Change ever require you to remove the 149 on No. 11?

**Mr SMITH:** No, they cannot; it is a statutory requirement.

**The Hon. LYNDA VOLTZ:** So there was a 149 on No. 11.

**Mr SMITH:** Yes.

**The Hon. LYNDA VOLTZ:** Why was it removed?

**Mr SMITH:** It was not. A 149 has never been removed.

**The Hon. LYNDA VOLTZ:** You just said it was.

**Mr SMITH:** A 149 is a statutory certificate and it must be issued on sale. When the Department of Health wanted to sell No. 11 it sought a 149 from the council. The council's 149 said that No. 11 was contaminated.

**The Hon. LYNDA VOLTZ:** So when it was subsequently sold by the next person—

**CHAIR:** We should get the full story.

**Mr SMITH:** The Department of Health asked for a 149, and the 149 said that the land was contaminated. The purchasers knew that but still went ahead with the purchase. Obviously they were satisfied by the Department of Health that everything was fine. I do not know; the committee would have to ask them. They then subsequently lodged a development application to do alterations and additions. The council did not know whether the land was free and clear, and we were not prepared to agree to the development application unless we knew that. Therefore, we made it a condition of consent that the land had to be free and clear before we would approve the application. The Department of Health then provided a section 55 certificate saying that the land was clear of contamination. We then changed our 149 and issued a new 149 stating that it was free and clear. When those people on sold their property in 2001 to the current owner, the 149 mentioned absolutely nothing about the contamination.

**The Hon. LYNDA VOLTZ:** When you required the section 55 certificate on contamination, was that on the land being built on or the whole site? Does NSW Maritime own the back of the site?

**Mr SMITH:** It applied to the lot known as No. 11. It is not part of the site or this bit or that bit; it is the whole of No. 11.

**The Hon. LYNDA VOLTZ:** What about the foreshore land?

**Mr SMITH:** That was not part of the 149 certificate because it is not part of the property description. It is not part of the ownership; it is a separate property.

**The Hon. HELEN WESTWOOD:** Are you aware of notations on other 149 certificates on Nelson Parade regarding contamination and, if so, how many properties have that notation?

**Mr SMITH:** At the moment Nos 7, 9 and 11.

**The Hon. HELEN WESTWOOD:** No others?

**Mr SMITH:** No others.

**CHAIR:** From your council's perspective could you briefly give the committee an idea of transport options if remediation were to be undertaken? What would be acceptable to council in terms of community health, dust and transport? How would you envisage getting that material off site if it were decided to transport it?

**Ms HOOPMANN:** I was going to raise that. It is a huge concern.

**Mr SMITH:** The mayor can probably talk about the public meeting held in late 2007 at which the community discussed that issue. From a purely technical point of view and based on what I now know, I would

suggest that the council would require all the material to be removed in accordance with the Australian Radiation Protection and Nuclear Safety Agency standards. That has never been mentioned. People understand the handling of asbestos and they know that it needs to be put in containers, wetted down and people must wear protective suits. This material would have to be subject to the same standards. That certainly would have to happen. I understand that at some point back in the 1980s there were people running around in suits, but we have no evidence of that; it is simply what we have been told by the residents. There is a difficulty with how the material is handled on site so that no dust floats all over the rest of the community.

The GHD proposal was to remove the material by truck. We have objected to that for a number of reasons. Obviously we must consider the safety issues. Members know that the streets are very narrow. How will they create a loading platform in Nelson Parade to load some unknown quantity of material? They are suggesting approximately 1,250 tonnes, but, oops, now it is about 3,000 tonnes. We have heard 950 tonnes, three or four square metres, but now it is 1,250 tonnes. Some unknown quantity of material would need to be trucked out.

Members have seen the site. How will they get it from the bottom of the site to the top of the site to put it into trucks to remove safely? We have contended all along that the material should be moved to the bottom of the site and taken out by barge. That is the most appropriate approach. People asked about would happen if it fell off in the harbour. What happens if it falls off in the street? You have a risk management plan to deal with those things. The least impact on the community would be barging it out.

**The Hon. LYNDIA VOLTZ:** Can barges get into that site?

**Mr SMITH:** That is an interesting question. It was suggested that the draught there is not deep enough. My response was, "For goodness sake, how deep is the draught on a barge? I understand that NSW Maritime did say that barges could be used, but people are now denying that. We have asked for some evidence one way or the other, but we have not received it.

**Ms HOOPMANN:** It is more costly and I feel that that was an excuse because of the extra cost.

**The Hon. LYNDIA VOLTZ:** They do have a draught and there would be a difference between a loaded and an unloaded barge.

**Mr SMITH:** We also know that there is probably contamination in the river at that point because it is very clearly identified. Again I refer back to the report by Gavin Mudd, who states that in the days when the smelter operated all the liquid was disposed of into the river.

**CHAIR:** Your report mentions 200-litre drums, but it does not say how many.

**Mr SMITH:** Three.

**CHAIR:** Earlier pictures in the local media show bags of sand stored at the bottom end of No. 11. Do you have any knowledge of that material being at the bottom of the property?

**Mr SMITH:** I do not. I am not sure about those pictures. The only picture I have seen is the one that appears regularly of the smelter itself. I understand from the residents that they believe it is the tin smelter at Kelly's Bush, not the smelter on the site. I have confirmed with Gavin Mudd today that he obtained that picture from the South Australian Department of Mines.

**CHAIR:** We have questions about that.

**Mr SMITH:** Someone does not have it right.

**The Hon. HELEN WESTWOOD:** In your chronology you refer to a significant safety issue at No. 5 Nelson Parade in March 1993. Is that another section 55 certificate and who issued it?

**Mr SMITH:** It was issued by the Department of Health. That is the name I have given it. It was not a section 55 certificate. It simply said that the site is now certified as safe. That is why I now have a concern about No. 5. I believe it should be part of the testing regime.

**The Hon. RICK COLLESS:** Is No. 5 occupied at the moment?

**Mr SMITH:** No.

**The Hon. RICK COLLESS:** Why if it is not included?

**Mr SMITH:** I have no idea. It was on the market, but it has been taken off. It is vacant.

**The Hon. RICK COLLESS:** But it has no 149 notation.

**Mr SMITH:** No, it does not.

**The Hon. LYNDA VOLTZ:** It was removed between February 1993 and—

**Mr SMITH:** A small amount was removed in 1993.

**The Hon. ROBERT BROWN:** Currently there is no notification on the 149 certificate for No. 11.

**Mr SMITH:** Yes, absolutely there is.

**The Hon. ROBERT BROWN:** In our site visit earlier this week we heard from representatives from the Department of Health. Mention was made of the fact that, apart from the radioactive material on the upper part of the site, there are some other materials on the foreshore part owned by NSW Maritime. It was claimed that relocating that from the site would be a more strictly controlled exercise than removing the radioactive material itself. I cannot recall the exact description of the material. That would probably tend to indicate that a removal by water would probably be a safer method of doing it. The other aspect of course is, as I said before or asked you before: Irrespective of whether the property is to be used for future residential land or open space, the council would still require an absolute minimum standard to be maintained.

**Mr SMITH:** Absolutely because, again, let us for argument's sake say that 7 and 9 were remediated to a level. No-one wants it to stay the way that it is. It is silly: Here you have a perfectly good piece of foreshore land, and potentially you could make a great piece of open space for the city to use, but you cannot let them use it because we do not think it is safe. Well, clearly, if it does not meet the particular standard, it is going to stay exactly the way it is. I think from my point of view the best point of reference I have now, that I can feel comfortable in recommending to the council and the Committee, is the Australian Radiation Protection and Nuclear Safety Agency standard, and that is one.

**CHAIR:** Mr Smith, you took questions on notice regarding the demolition of 7 and 11. We request that you furnish the Committee with that information within a period of two weeks, if that is possible.

**Mr SMITH:** Yes.

**The Hon. HELEN WESTWOOD:** Was that the remediation plan?

**CHAIR:** Yes.

**The Hon. HELEN WESTWOOD:** Or the approval for the works on the site?

**Mr SMITH:** To be perfectly frank with you, right off top of my head, I have been through these files pretty extensively in the last three days, and I have not seen these things.

**The Hon. HELEN WESTWOOD:** It would be just good to know if they exist.

**Mr SMITH:** But, again, I will make the inquiries. Would it be appropriate, if I cannot find them, for me to write to Health and ask them for them?

**The Hon. LYNDA VOLTZ:** We can ask Health.

**The Hon. HELEN WESTWOOD:** It would just be good to know if you have them.

**Mr SMITH:** I will endeavour to locate them, yes.

**CHAIR:** Let us know what you actually have, and then we can deal with the rest.

**The Hon. HELEN WESTWOOD:** I assume the council looks at population health data for the local government area. Have any concerns been raised about trends in terms of ill health or cancer incidence in that region that you are aware of?

**Mr SMITH:** I think it is fair to say that local residents have certainly raised with the mayor, I guess, the fear or the suspicion that there are higher rates of cancer in Hunters Hill than in other places. I would say two things about that: I think you will find if you look at the last census data it tends to indicate that there are higher cancer rates in certain high socioeconomic areas around Sydney. It is not just Hunters Hill. It just seems to be something that occurs. But certainly because of what we know about these sites and we know about the incidence of cancer, there may or may not have been people who lived on those sites who have cancer.

There is a very clear link between radiation and cancer. That is now an undeniable link. The research I have done over the past couple of days very clearly indicates there is a link between cancer and radiation. It does not necessarily mean that because you have exposure to radiation you will get cancer. If you have a predisposition to cancer, that may increase your chances. You know, I would have to say that it is not unreasonable for people to clearly have a concern.

**Ms HOOPMANN:** But from the new census, that really was not an enormous concern. We did go through it.

**The Hon. HELEN WESTWOOD:** Right. You have not requested any specific data from Health to ascertain whether or not there is a cluster of cancer in that area?

**Ms HOOPMANN:** No. The incidents that were reported to me were further afield than that particular area. But we are hoping that some of this testing will solve some of the puzzles that we have had for so long.

**CHAIR:** Thank you very much for your appearance. Aside from the material we have requested, if there is any other information that comes to light, please feel free to pass it on to the Committee's staff. Your cooperation is very much appreciated.

**Ms HOOPMANN:** Thank you.

**Mr SMITH:** Thank you very much for the opportunity to come along and tell you personally.

**CHAIR:** It is good. It has been very valuable.

**Mr SMITH:** It is a lot easier to do that than write it down and keep it to a rough count of 5,500 words.

**(The witnesses withdrew)**

**(Luncheon adjournment)**

**KERRY GAI CHANT**, Acting Chief Health Officer, NSW Health, Miller Street, North Sydney, and

**WAYNE TREVOR SMITH**, Director—Environmental Health, NSW Health, Miller Street, North Sydney, affirmed and examined:

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

**Professor SMITH:** Yes.

**Dr CHANT:** Yes, I am.

**CHAIR:** If you consider at any stage that certain evidence you wish to give or documents you may wish to tender should be heard or seen only by the Committee, please indicate that fact and the Committee will consider your request.

**Dr CHANT:** I will

**Professor SMITH:** Yes.

**CHAIR:** Do either of you wish to make an opening statement before questions commence?

**Dr CHANT:** I will open and we will make ourselves available to answering questions. I thank the Committee for giving me the opportunity to appear today and contribute to these proceedings. The New South Wales Department of Health plays two roles in regard to this issue. We are not only the current landowners of sites 7 and 9 Nelson Parade, Hunters Hill, but also, importantly, the Health Department has a health protection role to ensure that public health is not compromised from environmental risks such as chemical and radiological contamination. Historically, the Health Department was also responsible for radiation control management through the Radiation Control Branch. However, that branch was transferred to the Department of Environment and Climate Change in 1992.

As the Acting Chief Health Officer I determine the Health Department's views on matters of public health. In that respect, the Department of Health takes the community's concerns about contamination very seriously. The internationally recognised Australian Nuclear Science and Technology Organisation conducted a radiological survey on properties adjoining Department of Health land in Nelson Parade in February this year. The aim of the survey was to determine the potential exposure of members of the community and the occupiers of those properties to external gamma radiation.

A screening survey was employed to establish whether external radiation levels in Nelson Parade, including No. 11, were substantially different from previous surveys. The results of the testing undertaken at the three sites have been provided to the individual property owners and Professor Wayne Smith, the Health Department's Director of Environmental Health, offered to meet with owners to discuss the results. Overall, the findings indicate that the exposure levels fall within the Australian Radiation Protection and Nuclear Safety agency's recommendations for general public exposure. The planned remediation of sites 7 and 9 Nelson Parade will further reduce radiation detectable on the boundaries of 9 and 11.

The Health Department has engaged the State Property Authority to manage the remediation and sale of Nos 7 and 9 Nelson Parade. The overall aim of the remediation is to render those sites suitable from environmental and health perspectives that allow low-density residential use. The current proposal to remediate is subject to the requirements of the Environmental Planning and Assessment Act. In regard to the Health Department's health protection role, the Environmental Health Branch has provided public health advice to the Department of Planning to ensure the remediation plan protects the public and local residents. I table for the Committee a submission and information provided to the Department of Planning by the Environmental Health Branch.

#### **Documents tabled.**

Finally and importantly, the Health Department is aware of community concerns about cancer cases possibly due to the site, and we have listened to residents and former residents who spoke this morning. We have heard their fears and uncertainties. Whilst we have no evidence to suggest there is such a link, we welcome



contact from those residents who have concerns about their health and the health of their families to discuss those matters. In particular, Dr Michael Staff, the Director of Environmental Health in the Northern Sydney Central Coast Area Health Service, or Professor Wayne Smith, are willing to meet with the current residents and former residents about these issues. Again, we will make those details available to the Committee to hand on to those who spoke this morning.

In addition, we were approached by the Committee to provide some details around conversion of the radiological units to assist the Committee in its deliberations. I have two handouts that may be of assistance to Committee members. If the Committee sees fit, Professor Wayne Smith will be happy to take the members through those documents. I thank the Committee for the chance to address these issues and I am happy to take questions.

**CHAIR:** Professor Smith, do you wish to say anything before questions commence?

**Professor SMITH:** No, I am happy to take questions or, if the Committee wishes, I am happy to take you through the handouts on radiological conversions.

**CHAIR:** It would be of assistance to have a brief outline. For my purposes, could you explain how the accepted background levels have changed and the various readings—becquerel, gray, sievert, et cetera.

**Professor SMITH:** First, the units. There is confusion on two fronts there. One is that the units that measure radiation were changed in the 1970s in most places, except the USA, which maintains the old descriptions. In the USA and prior to 1960 people were using the curie, the rad, the rem, and the roentgen. Since the 1960s everywhere bar the States uses becquerel, gray, sievert and coulomb per kilogram. That is described in the handout. The other handout is a simple approach to why they are using these things. The Roentgen is really equivalent to the amount of energy absorbed; the coulomb is the measure of gamma radiation in a cubic centimetre of air. The rad, which is equivalent to the gray in different units, is equivalent to the amount of energy absorbed by anything that is in that region. The rem is the does of radiation that has a biological effect.

For humans, for gamma radiation, these are all equivalent. There needs to be very little confusion there in relation to humans, in relation to gamma radiation. In relation to other types of radiation, alpha particles, there is a conversion factor to be calculated. In terms of the evidence that you have before you with measures on site, they will be measured in the gamma radiation amounts that you have seen. They are expressed in either grays or microsieverts per hour. Micrograys and microsieverts per hour are essentially equivalent when you are thinking about the absorbed biological effect it does to humans. You will also get a view, measures of becquerels, and these are the measures in the soil that are measured, the actual radiation coming from that substance in air. From a simplified point of view—

**CHAIR:** If that is possible, yes.

**Professor SMITH:** —for practical purposes you are reading the bottom line of this handout. In terms of radiation protection in humans, most experts agree that these three different types of measures—that is the becquerel, gray and sievert—can all be considered equivalent, and exposure rates you will see will often be expressed, in the United States they would be roentgen or milliroentgen. Here we would be talking about things like micrograys or microsieverts. You have probably got two reports in front of you: the ANSTO report and the ARS report, one of which reports in microsieverts per hour and the other reports in micrograys per hour. They are essentially equivalent.

**The Hon. RICK COLLESS:** Numerically equivalent, do you mean?

**Professor SMITH:** Yes.

**Dr CHANT:** In relation to the background radiation—which I think was the second part of your questions—we have an additional handout. I will ask Professor Smith to take us through this handout.

**CHAIR:** I am mindful of the amount of time we have available. I think this would be extremely useful, but we have a lot of questions to ask you so we might keep that for future reference. In terms of the properties in the area and the one property that has been bought and sold, No. 11, and the sale of which at one stage there seems to be some conflict in understanding between the Department of Health and the local council as to whether there was in fact any identification of radiation levels on the property at the time of sale or various sales

along the line. Can you clarify that situation at all? In terms of, is it 149 certificates and the various responses from council and the Health Department in terms of the safety with the on-sale of that property?

**Dr CHANT:** I will endeavour to answer within the scope of what is available to us. As I said, our primary role in this is around protecting public health. A number of the documentation went with the former radiation control unit across to DECC and our reviews of the documents have largely focussed on documents that inform us about advising around public health risk. Having said that, I am aware of documents that have been, some selected documents and not all of the documents but a number of the documents which refer to correspondence from both the previous Health Commission that preceded the Health Department to in its form of letters to council and correspondence there which does show that at particular times language such as "clean up was undertaken and it complied with various standards". I have seen correspondence to that effect, which allowed me to form the view that officers were having regard to developing remediation plans that had due regard to the standards of the day. I am afraid I have not seen all the various correspondence on that, but would be happy to provide detail in relation to our knowledge of 149. I understand that that is a planning tool that is used as a management strategy by local councils as a way of indicating historical issues to do with sites.

**CHAIR:** I think it relates to the fact that the Health Department gave the house for sale a bill of health at a certain point in history.

**Dr CHANT:** There has been a deal of correspondence that I have seen dating from that. I am happy to comment or seek further clarification of a particular time and provide to the Committee some correspondence around that. As I said, I am not familiar with all the documents around the clean bill of health. There were a number of documents which said, "Having due regard to the standards, we now think it is clean" or "clear", and I know that there is one document that I have seen which was a stamp on a thing I think from the collection in 1989 where it was stamped "clean of contamination" but I think it is important that the context in which that correspondence was had is known. It would be impossible for me to comment in full with the correspondence in isolation of correspondence on either side of that.

**CHAIR:** The Department of Health has given a clean bill—

**The Hon. ROBERT BROWN:** It is called a section 55 certificate.

**CHAIR:** Thank you, a section 55 certificate or a clean bill of health. Yet we are finding that the property, as a result of that—that is my understanding of it and I am open if any other members would like to further clarify that—that it was sold with a clean bill of health and it was then subsequently resold to the current owners in 2001 with no indication of any issues arising, yet there are still significant levels of contamination on that site.

**Dr CHANT:** I think the issue is if we go back to the submission that the whole-of-government provided to the Committee, one can see that there was remediation of the site, that Health relocated the residents that were currently in site 7 to a property on 11 and that there was correspondence to the effect that clean-up had been done prior to relocating and the exchange of contracts to 11. At the time there was also, I am advised from my asset and contract branch, a caveat on the contract in relation to the people who Health sold it to immediately after the remediation to the effect that they could have access across their land to do some further remediation on 13. So there is some correspondence for that period that shows that Health undertook remediation, that Health commented on the effectiveness of that with due regard to contemporary standards of the day and formed the view that that was safe for sale. My understanding is there was also a 149 attached to the sale contract. So the owners who were sold the land initially from Health were clearly involved intimately in the concepts of remediation and issues of the time. I am unaware of the details of the sale by that owner to the current owners. We are not privy to the council documents in that regard and unfortunately I cannot comment on that.

**CHAIR:** My understanding is that the Department of Health stated in a letter to Hunters Hill council that No. 11 was clear of contamination in 1989. Is that statement true or false?

**Dr CHANT:** I think again it is important to understand that statement in terms of the context of the officers of the day, what they defined, we would have probably with hindsight used a different word other than "clear" in the sense that there is clearly contamination on the site and residual contamination on a number of the properties but I think in terms of how clean was written, it was written in terms of compliance with contemporary standards.

**The Hon. ROBERT BROWN:** At the time.

**Dr CHANT:** At the time, that is right.

**CHAIR:** So you are saying that that was compliant to what was appropriate at the time. Do you feel that Health fulfilled its responsibility to notify or indicate to council that it did have a clean bill of health? You are saying it is the standards at the time that did apply but do not apply now.

**Dr CHANT:** I would feel reluctant to form a view on one correspondence without having seen the series of correspondence that flowed between that and the understandings of the other correspondence. That is my difficulty in addressing that firmly one way or the other. I would need to see the documentation on either side of that and the context at the time to form a view.

**CHAIR:** Is it possible to make that correspondence available to the committee at a later stage?

**Dr CHANT:** Many of the documents would be council documents to which we have not got access. The difficulty is this is historically reconstructing decisions many years ago. The documents would need to be seen what council documents had on their records and what DECC had on its records, and any other relevant planning agencies may have held at the time.

**The Hon. LYNDA VOLTZ:** Do we know why the section 55 was written? Did it relate to correspondence that came from someone for a request for it?

**Dr CHANT:** I am sorry, I do not know. I could make a supposition but it would not be based on factual evidence.

**The Hon. ROBERT BROWN:** Mr Chair, given we are going to receive evidence from the DECC maybe we could ask it for the documents it has and it would also be helpful if Health had any documents that are part of that suite that we have not got.

**Dr CHANT:** Yes. I can certainly request our assets and contracts branch to go through their records because they would have some records that may be pertinent in relation to the history of the sale, if that would help the committee?

**CHAIR:** Thank you.

**The Hon. RICK COLLESS:** Professor Smith on 29 January in the *Sydney Morning Herald* you are reported as saying that the planning for cleaning up the site is only the beginning; we do not know how it is going to be done. Is that an accurate quote from you?

**Professor SMITH:** At the moment we have not seen a formal environmental application for mitigation. The process that normally happens—what has happened here is that the assets arm of Health has contracted the remediation to State Properties who have then employed an independent company, a contractor, to draw up plans for remediation. We saw some early draft plans and made some comments on those that were then going back to be considered, and a final draft of that has not been received by us. We have not seen a full draft: it was just an early plan. In environmental health, our role is not as a regulator, we give public health advice to environmental applications.

**The Hon. RICK COLLESS:** Did you say on 29 January that planning had just begun, or it was only the beginning?

**Professor SMITH:** I cannot recall my exact words. They would not have been, to my knowledge, the planning processes in its early stage I think is what I said.

**The Hon. RICK COLLESS:** Were you aware that the Health Administration Corporation lodged a part 3A application to remediate the blocks on 20 November 2007 and that that application specifies how the remediation will be carried out?

**Professor SMITH:** I am aware that an early application was put through that we put advice to. The processes in these normally are that an application comes through, we give advice to that application and then a final application comes through that we then comment on.

**The Hon. RICK COLLESS:** As of 29 January were you aware that planning was that advanced?

**Professor SMITH:** I was aware that the process had begun, yes.

**The Hon. RICK COLLESS:** On 29 January the *Sydney Morning Herald* also reported you as saying that "We are planning on removing the contaminated soil either by sealing it where it is or digging it up". Is that quote accurate?

**Professor SMITH:** To my knowledge that they are the only two options you have: you either dig it up and take it away or you seal it on site.

**The Hon. RICK COLLESS:** Do you agree that you said that on 29 January to the *Sydney Morning Herald*?

**Professor SMITH:** I cannot recall my exact words but there is only two options so I would have said something along those lines.

**The Hon. RICK COLLESS:** Were you then suggesting that sealing the waste where it was as of 29 January when the preliminary environmental assessment from 20 November had already ruled out sealing it on site?

**Professor SMITH:** The preliminary environmental assessment is just that: it is a preliminary environmental assessment. We do not make final comments until the final one comes through. The process has a long life in these applications.

**The Hon. RICK COLLESS:** But the preliminary environmental assessment had already ruled out sealing it on site.

**Professor SMITH:** A preliminary environmental assessment is a preliminary environmental assessment. The options are that you either seal it on site or you take it away.

**The Hon. RICK COLLESS:** If you are going to take it away where will it go?

**Professor SMITH:** You will have to ask DECC that. I am not an expert in the disposal of waste, I am only an expert in the health effects of waste.

**The Hon. RICK COLLESS:** On 30 January the *Sydney Morning Herald* already reported you saying that "no time line existed for the remediation of the site and the sale of the land". Do you recall saying that?

**Professor SMITH:** I probably would have said something similar because I was not aware of any time line that exists in that because how long is a piece of string? You cannot actually say how long it is going to take for these processes to be gone through. Any application for development, remediation or anything else has to satisfy directors' general requirements both through Health and the Department of Environment and Climate Change [DECC]. That process takes as long as it needs to ensure public health and environmental safety.

**The Hon. RICK COLLESS:** Are you aware that tests conducted on Nos 7 and 9 in 1977 by a government showed that radiation levels were as high as 450 picocuries per gram, which compares with the value of 1 to 3 picocuries per gram for typical garden soil? Are you aware that similar tests carried out on No 11 in 1965 showed activity levels of up to 75,000 picocuries per gram?

**Professor SMITH:** I am aware that the levels are very high there which is why the remediation—

**The Hon. RICK COLLESS:** That is a high level, is it not?

**Professor SMITH:** Oh, they are high levels, yes. There is no argument that they were high levels there and that is why Health was instructed to take over the land and to remediate.

**CHAIR:** In the three tiers of low, intermediate and high level of radioactivity, what would that be classified as?

**The Hon. RICK COLLESS:** The 75,000 picocuries per gram?

**Professor SMITH:** To be honest, I cannot give you an exact answer to that. From a health perspective, I only look at it at two levels: one is whether this is within guidelines for public health safety or whether it is not within guidelines of public health safety. Those levels prima facie are not within public health safety levels.

**Dr CHANT:** It may appropriate to refer to the submission sections and refer the question to the DECC that has formed a view about the level of contamination in the soil because that dictates the remediation strategies and is covered in the inquiry.

**The Hon. RICK COLLESS:** Professor Smith, are you aware that those same tests showed Radon level 16 times higher than the recommended level for members of the public inside the house that stood on No. 7 and it was those tests that led to the Government acquiring Nos 7 and 9, and demolishing the houses that stood on them?

**Professor SMITH:** I am aware that there were high Radon gas levels in No 7, but not in the houses that were existing on the other properties.

**Dr CHANT:** In relation to No. 7 could I add that my understanding again of the detail that is in the submission is that because the radium soil looked like sand, a lot of the sand was used in the foundations and the mortar under that, and at that time when they removed some of that, so we are not actually talking about the land, it is actually a concentration of effort that was put around the house.

**The Hon. RICK COLLESS:** The Health Commission actually commissioned the demolition of Nos 7 and 9?

**Dr CHANT:** My understanding is that is correct; that they did something to No. 7 and relocated the owner to No. 11 is my understanding.

**The Hon. RICK COLLESS:** Do you know where that contaminated material from the buildings was taken to, particularly the mortar, which you just said was made from the radium sand, so it was highly radioactive?

**Dr CHANT:** I am unaware of that. Perhaps a further analysis of the DECC records about the demolition might reveal that but I would have anticipated that it would have remained on site.

**The Hon. RICK COLLESS:** What is your comment on the independent assessment by Bern Scott written for the Department of Health in 1977 that:

It is clear that the only remedial action which could be considered is the complete removal of all the soil from blocks 7 and 9, complete removal of all the contaminated material from under the house of No. 7, and removal of all soil from the bottom corner of No. 13. Details of Nos 3, 5 and 11 and the waterfront will be available when the survey of these areas is completed.

What is your comment on that quote?

**Professor SMITH:** I would have to look at the full documentation on that one, but my understanding of that report was that that was in the context of those two blocks being safe for human habitation.

**The Hon. RICK COLLESS:** So, subsequently it has been shown that they are not?

**Professor SMITH:** No, there has not been anybody living on 7 and 9 for quite a while. The reason for that is that we are aware that there is radioactive contamination on 7 and 9, and we as the public health people would not permit people to be resident on those two blocks.

**The Hon. RICK COLLESS:** But the Bern Scott report said it is clear that the only remedial action is the complete removal of all the soil, and that has not happened at all?

**Dr CHANT:** Again, the issue was about the nature of the exposure. Clearly, to achieve the ability to put residences on that property, one would have to remove the contaminated soil, and that was the basis for the remediation plan on 7 and 9, if you want residents to live on it. I suspect again the context of that report is if you want it fit for habitation, which would be the remediation strategy. So, I think it is linked to the concept of habitation, assuming you want to allow it to be habitated.

**The Hon. RICK COLLESS:** Were you aware that Bern Scott also recommended removing the soil in small quantities under the direction of a person with a radiation monitor, so that the most highly contaminated soil may be segregated from any which was only slightly contaminated? Given the fact that the radioactivity varies greatly across the site, is this a strategy that you favour and, if not, why not?

**Professor SMITH:** I think we need to put this in context. In 1977, when that report was written, a large amount of remediation has already been done since then and which has concentrated most of the radioactively contaminated soil on to 7 and 9. My understanding is that that process was done with the proper procedures to protect people—both residents and workers at the time—under the auspices of the radiation protection branch and subsequently the Department of Environment and Climate Change.

**The Hon. RICK COLLESS:** But the site remains unsafe, even for low-level activity on it, not residential activity? You would not consider it safe for use as parkland in its current situation?

**Professor SMITH:** We would prefer it to be vegetated and fenced in its current situation, which it is. The vegetation leads to stabilisation of the soil so you do not get any soil contamination coming through. It also restricts access, and the fence further restricts access.

**The Hon. RICK COLLESS:** We have also been given some maps, one from the Hunters Hill council in particular, which show there is a very high level of radiation right up to the boundary of No. 11. Do you suspect that those contours continue under No. 11?

**Professor SMITH:** As you are aware, with No. 11's permission, we contracted ANSTO to do a radiological gamma ray screening survey of a number of blocks, including No. 11. The radiation isopleths you are referring to there are the ones of most concern—and of most concern to me when I saw them as well. To ensure that those levels were not unsafe for human habitation—in other words, if they did fall below our ARPANSA guidelines—we were keen to do some measures on those sites. Those contours that appear to project on that map are just that—projections, not measures. The measures that were done on site reveal some increased gamma radiation levels on the border of 9 and 11, most of which are likely to be emanating from 9. There are some hotspots.

**The Hon. RICK COLLESS:** Were they aerially done with a Geiger counter a metre above the ground?

**Professor SMITH:** They were done with a dosimeter, I believe, a metre above ground. ANSTO provided the expertise and the technical ability. We have a description of how that was done with an ANSTO report here that you can have.

**The Hon. RICK COLLESS:** So, did you draft guidelines for ANSTO to do that study?

**Professor SMITH:** Yes. We consulted with ANSTO and DECC about what type of survey would be appropriate to be done in these circumstances, and we were advised this was the most appropriate, given the reason we were interested in doing the survey.

**The Hon. RICK COLLESS:** Why did you not commission some soil sampling and sampling, say, at the depth of a metre, like the Australian Radiation Services study did—and found some quite different results, as I understand?

**Professor SMITH:** We were interested in risk to public health from the land use as it was currently being used. We were aware that as part of any remediation process one of the recommendations we would be making was to measure radiation levels of all sorts before, during and after remediation to ensure that all of the areas that needed to be remediated are being remediated and that the workers or the residents are not going to be

affected, and that once the remediation is complete that all of the contamination—or most of the contamination—is gone. So, those detailed measures would have been done during the remediation process.

What we were interested in in this survey was to ensure there was no immediate risk to public health. For that reason, really the only exposure route was through gamma radiation. You are not going to be digging large holes and sitting in them. The radon levels that you noted before were mostly high on 7 and 9. They vent to the atmosphere and are blown away, but the likely contribution from radon gas is not going to be that high so, on that basis, the gamma radiation is going to be the bulk of the radiation exposure to any residents who are going to be in that vicinity.

**CHAIR:** What testing for radon dust or radio nuclei uptake has been done to assess public exposure there?

**Professor SMITH:** Since the last remediation, my understanding is soil sampling has been done and gamma radiation measures conducted on 7 and 9, but I have not been able to find any information about those measures on any other blocks.

**CHAIR:** So you are saying gamma radiation, but radon is a different situation given that it has different properties. It is a heavy gas in this respect, it is not just emitting gamma radiation. So there is a possibility there that radon is collecting in areas that could impact?

**Professor SMITH:** The possibility of radon gas collection is a fact. At any location you can get radon gas accumulation. In this particular area, 7 and 9 contain a vast majority of the radioactive material, the gamma radiation of which you can measure across the fence on No. 11. The radon gas would not travel the same way. It would go up and vent to the atmosphere where there are no buildings.

**CHAIR:** Where there are buildings, for example, on No. 11, there is a possibility that it accumulates underneath the area?

**Professor SMITH:** There is a possibility but the gamma radiation measures inside the house were not terribly high in most of the house at No. 11.

**CHAIR:** So you are satisfied there is a crossover between measuring gamma radiation and therefore achieving safety in terms of radon levels? From your professional department's point of view, is that a suitably sophisticated assessment to take?

**Professor SMITH:** No, one would prefer to do radon gas measurements. My advice is that radon gas measurements are very time-consuming and difficult to take, and a radon gas survey of any location would take months to do properly, and what we wanted to be able to do in this case, because there was starting to become community concern about radiation levels to the general public, was to determine whether there was likely to be any major problem with respect to the Australian Radiation Protection and Nuclear Safety Agency [ARPANSA] guidelines.

**CHAIR:** There has been some concern about ANSTO's level of assessment and later assessments that were undertaken. There is some clear disagreement with the radiation levels. Do you stand by ANSTO's method of assessment in this particular situation?

**Professor SMITH:** I have received ANSTO's report, which I believe has been vetted through every level of ANSTO and approved for release. It is not my expertise to actually measure radiation; my expertise is looking at the health risk from radiation, so we commissioned ANSTO to do this report. I believe you are calling ANSTO in tomorrow and I think that question would be better answered by them if they have any concerns. I was led to believe that this was a valid approach given the constraints of measuring just gamma radiation.

**CHAIR:** Are you able to provide the Committee with a copy of ANSTO's February 2008 report on the site?

**Professor SMITH:** Yes.

**CHAIR:** I understand we have an edited copy currently, but this would be the full report?

**Professor SMITH:** This report, as you will see, has very few lines blocked out. They are the ones that refer to individual properties. I believe that No. 11 has given permission for their details to be released. Is that correct?

**CHAIR:** They are indicating that they are agreeable. My understanding is that the people representing No. 11 would be happy. Because the staff are not aware of the level of detail in terms of the report that you are going to give us compared to the one we have, can we get a copy of the report with no abridging?

**Professor SMITH:** Our legal advice is that we cannot give that to you because we undertook a verbal agreement with the residences that we went into and did measures on that we would privately provide them with their own measures and no measures from any other properties. This report will give details about the methodology that ANSTO used, how they did the measures, how they did the background measures, what instruments they used, what the measures findings were on No. 11 and on the roadway, and some information about the perspectives of the analysis of some of the Hunters Hill results. The only things that have been blacked out here are the specific results, room by room, in the residences that have not given their approval and the numbers of those residences throughout the report. They are the only things missing from this report; otherwise it is a complete report.

**The Hon. RICK COLLESS:** It is fair to say then that we are talking about more than blocks 7, 9, 11 and 13?

**Professor SMITH:** No. I think 3, 5, 7, 9, 11 and 13 was the extent of the land identified as being contaminated historically.

**The Hon. RICK COLLESS:** But that ANSTO report does check residences in addition to those. Is that correct?

**Professor SMITH:** No, that is not correct. It is restricted to the areas that were historically noted as being contaminated, plus the roadway.

**The Hon. RICK COLLESS:** I recall you saying that the numbers of residences that were checked were deleted from the report.

**Professor SMITH:** That is correct, the specific numbers.

**Dr CHANT:** Identifying street numbers.

**Professor SMITH:** But the ANSTO survey was restricted. We approached each of the residents and those who gave permission we did a radiological survey in their houses and gardens, on their property. One did not give permission and had done previous remediation work and had previous surveys done themselves in any case. Otherwise we are talking about the entire area. But you will also notice there were no measures done on 7 and 9, and that is because they are inaccessible.

**The Hon. RICK COLLESS:** Are you aware that the material on the site will continue to become more radioactive over the next 1,000 years?

**Professor SMITH:** It will not become any more radioactive; it will continue to be radioactive.

**The Hon. RICK COLLESS:** As I understand it—correct me if I am wrong—over time uranium degrades into radium and that radium becomes more radioactive?

**Professor SMITH:** I am unaware of what relative proportions are there now and where they are in the decay process.

**The Hon. RICK COLLESS:** Can you guarantee, if that material is disposed of in an industrial waste dump somewhere, no homes will be built on that site in the next 1,000 years because of that very problem?

**Professor SMITH:** As I said before, I am not an expert on disposal and the Department of Environment and Climate Change [DECC] is. From the public health advice perspective, we will be advising on any form of remediation including, if transported anywhere, on human health in transportation and where the



final location is. We will be insisting that whatever facility it is taken to—if it is taken away—complies with the guidelines for public health safety.

**The Hon. LYNDA VOLTZ:** Dr Chant, the 1987 report, a copy of which was given to us by the council, is the same report that is in the submission from government agencies. You say that there was remediation carried out after that report. Is that correct?

**Dr CHANT:** That is right. After 1987 there were various clean-ups that happened in various ways, even from a description I think of someone putting some radioactive material in a plastic bag and putting it behind a fence, so at various points in the process there was progressive consolidation of the radioactive material to sites 7 and 9 and where we are now reflects those efforts at various points.

**The Hon. LYNDA VOLTZ:** There is a small spot on No. 13 that was identified in that 1987 report.

**Dr CHANT:** That site, on my understanding—please correct me if I am wrong—was not the site that agreed to allow us in to do our survey because they had previously undertaken ANSTO's surveys and my understanding is that that small hotspot in their backyard was identified as part of a previous survey. I cannot comment on the fate of that. I have anecdotally heard that it may have been removed, but I have not got anything to confirm that.

**Professor SMITH:** That is my understanding too.

**The Hon. LYNDA VOLTZ:** So No. 13 in fact may not have had remediation?

**Dr CHANT:** My understanding is that lot 13 has been extensively remediated. The only issue with 13 to my understanding is that in one of the more recent reports there was one isolated hotspot, which the consultants that did it on behalf of 13 have indicated presents no risk to human health because it requires you to stand over that one spot, but they did have some notation in the submission to you that clearly, if you were building or doing anything, you would have to have regard to that. I have heard anecdotally, and I am not sure who told me, that that may have been remediated since the statement in fact, so I cannot comment on whether that hotspot exists at the moment, but it was a small hotspot.

**Professor SMITH:** We do not have any formal communication on that, but we understand that they have engaged ANSTO to do survey work while they were doing remediations in their property.

**The Hon. LYNDA VOLTZ:** When they were doing their extensions?

**Professor SMITH:** Yes, and although I do not have any written material on this I think that was taken away, but I am not sure.

**The Hon. LYNDA VOLTZ:** The ones we are seeing on the 1987 report, the pink spots that are sitting in No. 11 and No. 13 and perhaps just on the border of No. 5, that may still exist and may not have been have been remediated?

**Professor SMITH:** Yes.

**Dr CHANT:** In terms of the bulk of the contamination, 7 and 9. Thirteen is generally clear and that is from our understanding—

**The Hon. LYNDA VOLTZ:** Except for the one small spot?

**Dr CHANT:** Except for the one small spot and the fact that they have had ANSTO work, which has been recorded, very comfortable with the issues around 13 and the one small spot, and we have done the information on 11. So things would have changed significantly would 1987.

**The Hon. LYNDA VOLTZ:** They would have changed?

**Dr CHANT:** Significantly from 1987.

**The Hon. LYNDA VOLTZ:** On No. 11?

**Dr CHANT:** On No. 11, yes, because I have seen some correspondence and I would have to check the date, but around 1987 to 1988 there was some movement of material from 11 on to 7 and 9, ahead of the exchange of contracts to allow the resident in 7 to move into the property on 11. I can provide the Committee with copies of that correspondence.

**The Hon. LYNDA VOLTZ:** That would be good.

**Professor SMITH:** The remediation continued up until about 1992, I understand, and as you recall from our discussion earlier on about the deeds, part of this trail of communications referred to access across No. 11, remediating 13 and 11 at the time.

**The Hon. LYNDA VOLTZ:** It was at about that point that three drum loads of material was removed from the site, is that correct?

**Dr CHANT:** In relation to?

**The Hon. LYNDA VOLTZ:** There was some contaminated soil actually placed in drums and removed to Lidcombe?

**Dr CHANT:** The Department of Environment and Conservation would be in the best position to answer that.

**The Hon. ROBERT BROWN:** Professor Smith, the letter that you tabled is your letter, I take it? You are the same Wayne Smith?

**Professor SMITH:** Yes.

**The Hon. ROBERT BROWN:** You wrote to Annemarie Carruthers, Senior Environmental Planning Officer. The letter talks about remediation of 7 and 9. Am I to assume from that the Department of Health does not believe that there should be any further remediation work done on 11 and 13?

**Professor SMITH:** The letter refers to the application that was put from State Property circulated to us to comment on. That was restricting its view to 7 and 9. That is what that letter is about, commenting on the initial application for remediation. While at the moment for the current land use on No. 11 the current indications are that radiation levels fall below ARPANSA guidelines, the ideal in any situation is to get rid of as much contamination as you possibly can, so I think from my perspective I would prefer that all accessible contamination be removed.

**The Hon. ROBERT BROWN:** NSW Health has a responsibility for public health?

**Professor SMITH:** Yes.

**The Hon. ROBERT BROWN:** Would it be appropriate for you or for the department to express that view now, even though that view is not expressed in this letter?

**Dr CHANT:** The letter is a specific response to the environmental assessment.

**The Hon. ROBERT BROWN:** I understand that.

**Dr CHANT:** Clearly we have expressed the view that readily accessible contamination should be removed and my understanding is that that position has been put to the owners of 11.

**The Hon. ROBERT BROWN:** In writing?

**Dr CHANT:** There was a meeting that occurred between the legal representatives to discuss whether 11 would be happy to participate in remediation at the time. They obviously can speak to themselves but my understanding is that they may have concerns with that course of action, but I think it is prudent that those discussions occur that include us.

**The Hon. ROBERT BROWN:** Would it be appropriate for the Department of Health to comment on 11 and 13? In other words, "Thank you for the application for 7 and 9" and these are our comments on 7 and 9 here. "However, given our knowledge of the sites, we recommend that further consideration be given to remediation on 11 and therefore you should take that up with the owners of 11". Is that the sort of thing, from the Department of Health point of view, that you would be recommending or that you would put your viewpoint forward to the ANSTO people?

**Dr CHANT:** Our position is—and we have conveyed that—that readily accessible contamination should be removed at the time. It makes commonsense that if you are remediating and removing product off 7 and 9, that is an opportunity to access readily available material. As Dr Smith said, our aim is to reduce exposure to the lowest possible level so we clearly support that concept of removing readily accessible material.

**The Hon. ROBERT BROWN:** Especially so, I suppose, given that this is going to be a fairly big exercise, the remediation of 7 and 9 is going to be a fairly carefully controlled, expensive exercise to actually remediate the site, whether it is taken up the hill in sealed containers and out through the road or whether it is taken off in barges. A lot of the high levels of contamination appear, on the information you gave us the other day, to be right up against that boundary of No. 11?

**Dr CHANT:** Yes.

**The Hon. ROBERT BROWN:** And the extrapolation of the levels of gamma radiation has been made on to 11, but I understand they are extrapolations. We have heard evidence that other testing has taken place, including soil testing on 11. It would seem to me that it would be in everybody's interests—the owners of 11, 13, the Department of Health, that if the facilities are made available to seal the contaminants and remove the contaminants, that all available material should be similarly treated during that period of time whilst the opportunity is open.

Once the site remediation is done and finished on 7 and 9, particularly if the intention is then to sell the land, it may be extremely difficult if other levels of contamination come to light as a result, show we say, of further developments; for example, if the people on No. 11 wanted to put a pool in the backyard where the fishpond is, that could be a public health risk down the track. Would the Department of Health have a viewpoint on the public health issues of perhaps extending and would you make that opinion public on the public record that all suspect sites should be, by whatever means, remediated at the same time that 7 and 9 are done?

**Dr CHANT:** What I would like to reiterate is that we would think that it was a prudent, commonsense approach that given, as you pointed out, the extent of remediation on 7 and 9, that at the time readily accessible radioactive contamination on any of the adjacent properties should be dealt with, and I think that is a valid, prudent way forward.

**The Hon. ROBERT BROWN:** Would the Department of Health be prepared to write to the representatives of site 11 and to the representatives of other sites and put that suggestion to them? I understand that you have done that but not in writing. Is that what you are saying?

**Dr CHANT:** I do not think there would be any objections from the department to writing to them but, as I said, the department has two roles. Whilst we put forward our public health advice the department owns the property and we have that separate role.

**The Hon. ROBERT BROWN:** I understand that, but you said that you had two separate divisions within the same department.

**Dr CHANT:** I understand.

**The Hon. ROBERT BROWN:** Your role is to advise from a public health point of view, which is why we are here.

**Dr CHANT:** We would certainly make that suggestion. I think that your suggestion to write to them is an appropriate suggestion.

**The Hon. ROBERT BROWN:** Professor Smith, I understand from your earlier comments that you are not an expert on remediation or the physical aspects of it. But, as I understand it, would the Department of

Health be the adjudicating authority on any monitoring that was taking place during any remediation work? In other words, would that be the role of your department?

**Professor SMITH:** Our role is to advise on the health aspects that need to be monitored.

**The Hon. ROBERT BROWN:** So you would set the guidelines?

**Professor SMITH:** We, in conjunction with the Department of Environment and Climate Change, comment on any applications and processes that have to happen around that, including monitoring. So we would say that we would like some monitoring done in this way in these areas before, during and after. We would advise from a health perspective and the Department of Environment and Climate Change would advise from an environmental perspective.

**The Hon. ROBERT BROWN:** Let us say that we proceeded down that track and that those sites were remediated. Which authority would do the monitoring and the compliance, if you like, of the remediation process? Would it be the Department of Health or the Department of Environment and Climate Change?

**Dr CHANT:** I think the procedure for that is outlined in the submission, but it probably falls more to the Department of Environment and Climate Change. My understanding is that we indicate the role of an independent auditor and various processes that are set in train.

**The Hon. ROBERT BROWN:** I have only one final question. We have had representations from local residents who have expressed varying degrees of alarm about what has been going on in their neighbourhood and the effect that press reports have had on them. However, there is a general consensus that they would like further testing done on a broader range of properties in the area to establish whether material was moved around in the 1960s and 1970s. If that were to take place, what sort of testing would the Department of Health recommend as a minimum? Would it be the sorts of things that you have done on lots 7, 9 and 11, in other words, the above-ground Geiger counter test, or soil testing? Professor, what would you recommend from a public health point of view?

**Professor SMITH:** From a public health perspective the levels of radiation beyond the previous radium site, the company site, are not raised. We have no evidence that there is anything raised beyond that site. The levels of radiation moving away from 7, 9 and 11 are decreased rapidly to background, and we have no reason to suspect that they will pop up again in any other location close to that, any more than they would in Cronulla or Blacktown. From a public health perspective I see no reason to go and do that. You might want to ask the Department of Environment and Climate Change from its perspective, as it has the role of being a regulator for environmental contamination. It will have a view on how it decides to do that.

**Dr CHANT:** I wish to add to that answer. I find concerning the level of concern that we have picked up in relation to members of the community. That indicates our need to engage them in relation to their concerns. From the department's perspective we will be following this up with the community. We will listen to their concerns and formulate a way forward in that regard.

**CHAIR:** Professor Smith, on lot 9 there is a well-established hot spot right near the border of lots 9 and 11. You indicated that radon testing would be very expensive.

**Professor SMITH:** Time consumption is more of an issue for our screening surveys.

**CHAIR:** There are well-established hot spots on the border of lots 9 and 11 and there is one significant hot spot that we were shown. Could that mean that radon gas would trespass from there to under the house on lot 11? Would you agree that there is a significant danger of that occurring?

**Professor SMITH:** There is certainly a possibility of that but I do not know how much of a possibility there is. My understanding is that the radon gas, being relatively heavy, will seep up and stay where it is, if it is in an enclosed space, or be blown away. First, I do not know how much radon gas is coming out of that hot spot on lot 9 and, second, I do not know what roof venting is happening.

**CHAIR:** Is that not worthy of testing? Is that not a serious health problem to anyone who might seek to live on lot 11, even for a relatively short time?

**Professor SMITH:** Potentially it is a serious problem, just as gamma radiation potentially is a serious problem. You would need to measure it to be sure that the indications from previous assessments in those areas showed that it was not a major contribution to total radiation. Having said that, I would like to see as part of the remediation process measures of all sources of radiation before, during and after remediation.

**CHAIR:** Is there a safe level for the inhalation of radon gas?

**Professor SMITH:** Generally people would not like anybody to be inhaling radon gas. Certainly that happens frequently overseas. I am unaware of the cut-point levels of radon gas. I can check those out and let you know.

**CHAIR:** Thank you, I would appreciate that. Given the proximity of the house at No. 11 to those hot spots, and given that you have not tested for radiation now that the house is currently empty—the owners cannot live in it and they do not have tenants—obviously it is a problem. During the time that the Department of Health owned it—from 1988 to 1989—you allowed the property to be occupied. Is there not an historical oversight in the treatment of people living in this house? I understand that officers from the Department of Health occupied it?

**Professor SMITH:** We have been looking through our records to determine what measures have been carried out before, during and after the remediation in the late 1980s and early 1990s to measure radon gas, soil samples and gamma ray measures. The measures that we have been able to find are mainly soil and gamma radiation levels.

**CHAIR:** But you did not test for radon?

**Professor SMITH:** I have not yet seen any documents that tested for radon gas subsequent to the last remediation process that occurred on 13 November.

**CHAIR:** In 1989 your department wrote to the owners of No. 11 Nelson Parade and sent annexure 15 (4) confirming that the lot was free of radioactive contamination. On what sort of statement would that have been based?

**Professor SMITH:** That would have been based on the guidelines of the day, which would have considered the radiation measures that the department had available to it.

**CHAIR:** At the time would that have been the above-ground testing?

**Dr CHANT:** And the soil testing.

**CHAIR:** And soil testing. That is understandable historically, but does that not mean that your department had some degree of responsibility in that the property passed out of your hands? There is some confusion as to what appropriate warnings were given to two owners down the track. Is that not reasonable, in particular, considering that you are looking seriously at remediating lots 7 and 9? We all agree that there are problems there but does that not mean that you have a responsibility to the people on lot 11 either to buy and remediate all those lots and give them appropriate compensation? Would that not be the most sensible and cost-effective way to move forward?

**Dr CHANT:** I think that is outside the scope of us to answer about cost-effectiveness or those issues in relation to the property.

**CHAIR:** I only raise the issue of cost-effectiveness because in reports here it is said a number of times, I think from the Department of Health, that we are undertaking to do the remediation of 7 and 9 in a cost-effective manner. In other words, keeping in mind the fact that the eventual potential sale of those sites will return sufficient to justify the expenses. That has been said in the submissions.

**Dr CHANT:** In regard to that, I think the issue of remediation of 7 and 9 will have a major impact on the gamma radiation to 11 and also remove the significant source of the potential rate—the issue that you allude to in terms of the potential for radon to be an issue.

**CHAIR:** But we do not know.

**Dr CHANT:** And remediation as well on the site of 11, readily accessible material would also contribute to removing that risk. As Professor Smith said, in terms of providing comment on the remediation strategy, issues such as a more detailed monitoring that would be required to assure ourselves of that would be incorporated and it was the intent to incorporate into the process the environmental processes.

**Professor SMITH:** As Dr Chant said and as I said earlier, we would be expecting very detailed before, during and after remediation sampling of all radiation sources. From the radiation isopleths and the source sampling that has been done, we expect that the measures of radiation along the boundary on 11 with 9 will decrease considerably once the contaminated land in the mound on No. 9 is removed.

**CHAIR:** You are saying that you are confident that there is not sufficient deposit remaining on 11 to be an issue after 9 has been remediated?

**Professor SMITH:** No, I am not confident. I am saying current indications are that that is likely to happen but we will not know that until we do the measures before, during and after remediation.

**CHAIR:** Would it not be reasonable from a public health perspective to have some sort of guarantee that that would resolve the problem? If you are going to undertake a strategy to resolve the problem would it not be appropriate to guarantee that relief would be given to lot 11 as part of the overall strategy?

**Professor SMITH:** What we would be commenting on from a public health perspective is we would want to be seeing at the end of the day after remediation has occurred that all levels are falling well below the ARPANSA guideline level.

**Dr CHANT:** Including any other issues that we were provided advice about—the full spectrum of radiation exposures, including on No. 11.

**CHAIR:** And if that did not occur on lot 11 what would be the action of the health department?

**Dr CHANT:** I would not be able to speculate in regard to that. I think the issue at hand is ensuring that in our comments concerning remediation on 7 and 9 it relates to the monitoring that we would require on the whole site and it is outside the boundaries of that site, to ensure that we have a comprehensive understanding of all forms of exposure the population would have.

**The Hon. LYNDA VOLTZ:** On the radon testing, in 1977 there was some radon testing done on all four sites?

**Dr CHANT:** That's right.

**The Hon. LYNDA VOLTZ:** And you moved some contaminated soil in 1977 from No. 7, which was the only place that was identified as having radon.

**Dr CHANT:** And the reason that radon was identified as an issue in No. 7, from my understanding, is that it was concentrated under the house in terms of the foundations of the house and that even, having said that, they actually moved some of that to lower the radon level. So the only place that they actually found a problem with radon was in the house, which had significant tailings used directly under the house.

**The Hon. LYNDA VOLTZ:** I have two questions. What happened to the soil in 1977 that was removed? You may not know that, but if you could take it on notice perhaps?

**Dr CHANT:** I would be happy to take it on notice.

**The Hon. LYNDA VOLTZ:** You went back in 1992 and tested again on No. 7 but not on the other site. So the question is what happened to those tailings at that point?

**Dr CHANT:** We would be happy to take that on notice.

**The Hon. LYNDA VOLTZ:** And if they were removed from site and No. 7 was the only place identified then that explains the radon testing to some extent. But I would be interested to know what happened with the soil.

**Dr CHANT:** The issue in 7 was also that it was a closed structure, which then trapped the radon.

**CHAIR:** I have notes from the minutes of a meeting on 22 May 2003, the Department of Health in attendance with a significant number of people—Hunter Council representatives, et cetera. In it Geoff Pollard from the Department of Health says, "The Department of Health does not have a capital budget for this project. The costs will have to be covered completely by the sale of the land with hopefully some profit". Can you comment on that? Is that still the situation?

**Dr CHANT:** I think the issue is that Geoff Pollard is from our Assets and Contract Branch or some other branch in the department concerned with sales. That is fine. Clearly what he is articulating there is that the land was surplus to the health department's needs. We have never provided health facilities from the site. Clearly our aim though, from the department's perspective, is to remediate this site appropriately. I cannot comment on whether there will be any opportunity for profit or whether the remediation will in the end exceed that.

**CHAIR:** We do have a designated budget for the project to remediate those sites.

**Dr CHANT:** I am not aware of the nature of the budget or the money put aside. I could take that question on notice for our director of that branch to answer.

**The Hon. LYNDA VOLTZ:** But as the existing landowners you would be legally liable whether you had the money or not, would you not?

**Dr CHANT:** That is correct. And at the moment we should note that we are compelled to clean up the foreshore chemical contamination and setting in processes for that.

**The Hon. HELEN WESTWOOD:** The remediation plan that you speak about—the one that is also referred to in this correspondence you furnished us with today—is that your department's remediation plan?

**Dr CHANT:** The process is that the proponent, which is NSW Health essentially, puts up the proposal to remediate. It has consultants which develop a remediation plan, and that has to go to planning in this particular case for approval; the planning department then reviews that plan; they consult with the health protection side of Health and DEC and other relevant agencies and we provide comments about what sort of aspects need to be covered in that remediation plan. In terms of the environmental assessment we comment on that from a health perspective; DEC comments from the environment perspective. Other agencies may comment, such as Maritime. Then, basically, that report goes through its next phases of confinement and then we are yet to see that next stage back to us where we then critique it and ensure that all the particular issues from a public health risk perspective have been addressed, and clearly the things that we would be looking for are the concerns of residents about the transport of the waste, how it is contained and issues such as monitoring as well.

**The Hon. HELEN WESTWOOD:** Given that it is in your role of public health that this plan is being prepared, would it just relate to the sites you own? Does the remediation plan take into consideration other sites other than the two that you own, 7 and 9?

**Dr CHANT:** The issue is that in terms of the development application, my understanding of the way it works is that you have to put up the development application relating to lots. From a public health perspective we might put conditions on it which involve monitoring off-site and in other lands, for instance, to ensure that there is no travelling of soil beyond the remediated site or various issues.

**Professor SMITH:** Normally, when we look at any development application, for instance, for a mine, we will not consider just what is going to be polluted on the mine site. We will look also at dust that will be blown across the town next to it and things like that. It is a similar situation even on small applications such as this one. This one, you have to remember the process was that Assets contracted State Properties to deal with this situation and they contracted an independent contractor, who then developed an initial remediation plan that was then sent back to us to comment on as well as being sent to DECC to comment on. Then we put our comments in and it goes back and the remediation plan then gets developed further. The initial remediation plan

was just really an outline plan; it was not in great detail and did not address all the issues it should have addressed. So, the process is in train at the moment, but we will comment on how any remediation affects neighbouring properties from a public health perspective and DECC will do the same thing with respect to how it affects the environment on neighbouring properties.

**The Hon. HELEN WESTWOOD:** Did you say there was a community consultation process as part of developing this plan?

**Dr CHANT:** That is correct, and again that was led by our Assets and Contracts branch where I believe the inquiry has been given a number of newsletters that were sent out as part of the community consultation. Public health, our unit, has put in various sections to their report to keep the public. In addition, there was also a letterbox drop done by the public health unit to alert residents to the issues and also offer the services of the public health unit as a contact point for residents if they had concerns.

**Professor SMITH:** There was also a public consultation meeting held in December, I believe.

**The Hon. HELEN WESTWOOD:** From what you are saying, the origins of this plan really are about the proposed sale of the land, the eventual sale?

**Professor SMITH:** Well, it is about a proposed remediation of those lands.

**The Hon. HELEN WESTWOOD:** From a public health perspective, have you developed a remediation plan for the area that takes into account the whole area, looks holistically at it rather than just at the sites you own?

**Dr CHANT:** Our role is not to develop the remediation plans; the consultants will do that. It will have due regard to the foreshore lands and other aspects where there is continuing work done. We will also have a view that ensures that the environment assessment documentation that is put to us has a broad-enough scope about understanding impacts that this remediation will have on other adjacent properties and the peninsular.

**CHAIR:** Do you have any knowledge of soil from a site being removed and used elsewhere in Hunters Hill beyond Nelson Parade? Given the concerns of the local community, do you have any infrastructure that would avail itself to testing as requested by other people in the Hunters Hill area?

**Dr CHANT:** I have no direct knowledge of residents removing soil. However, the history of this is a long, rich one and dates back. I would be unable to confirm absolutely that it did not happen. I think there may well be. So, I cannot really comment on that. In terms of the second part of your question, which relates to whether we have the capacity to do the testing—

**CHAIR:** And the inclination? I am wondering whether there was some sort of hotline or people from that local area were informed that they could have testing done by someone with equipment to at least check out; not necessarily digging holes in soil but to actually run a Geiger counter over their yards, if historically there is any worry that fill might have been placed in the yards in the neighbouring area?

**Dr CHANT:** I think we would encourage residents in the first instance to ring the public health unit, which will be set up to assess the issues they have raised and then working through which relevant government agency or whether we have to address their particular concerns. I think the first step is for them to engage with the public health unit, which is a local unit, and then we can work out what is most appropriate, given their concerns.

**CHAIR:** Is there any evidence of an increase in deaths from cancer or potential radiation-related illnesses in Nelson Parade compared to the rest of Hunters Hill?

**Professor SMITH:** There is none that we know of. We have looked at cancer, broader-term cancer rates, but they come down to a much larger area than just one street. We would have to count all of the cases that ever happened in that street and the duration of exposure for people who lived in that street and come to a conclusion about whether this is beyond expected or not. We have no way of counting that because the cancer register actually is not very valid prior to the mid eighties; it does not actually list all of the cancers, the people who had them and where they came from. So, it is not complete. The background cancer rate is that 25 per cent to 30 per cent of people will die from cancer. So, we know that in any given street we are going to have a lot of



people who are going to get cancer and die from cancer. Radiation-associated cancers, even the associations there are not very high. They will increase your risk by a little bit but not a large amount. So, you can look for patterns of types of cancer. We have not got the records to be able to look at those. We would encourage anybody with information about cancers to let us know, and then we can actually try to gauge that. There is no way that we can easily, or even with difficulty, assess that in any valid way. The exposure is very small. The footprint of this is very small and to detect an increase in cancer rate would require exposure to a very large number of people for a very long period of time.

**The Hon. RICK COLLESS:** Professor Smith, reading the ANSTO report, I notice the deletions, but a couple of tables are completely deleted—

**Professor SMITH:** They relate to the properties whose privacy we are respecting.

**The Hon. RICK COLLESS:** —as opposed to that one, which has the names and the rooms and so on deleted, but leaves the letters in them. I am just wondering why we would not have access to the levels?

**Professor SMITH:** I think the one that you pointed to last is on the street.

**The Hon. RICK COLLESS:** Why can we not have access to the levels?

**Professor SMITH:** Because they are private residences and people let us in to do their assessment on the understanding we would not release it to anybody else.

**Dr CHANT:** We are very happy to release it. If you would like us to go back to the residents and get their permission, we have no objection to doing it. We are just very conscious that we should not release it without—

**The Hon. RICK COLLESS:** What I would like to see is that column with the levels.

**CHAIR:** The levels without identifying the actual residence.

**Dr CHANT:** The only difficulty is that we are only dealing with a couple of residences. It is very easy to know that 11 is the one with these numbers.

**The Hon. RICK COLLESS:** Number 11 is not blacked out at all.

**Dr CHANT:** No, and they have given permission. The difficulty is that inadvertently you would be able to identify whether it is 5 or—

**The Hon. RICK COLLESS:** By the levels?

**Dr CHANT:** You would be able to. By the other evidence given, it would be very easy to.

**The Hon. RICK COLLESS:** All we want is that column there highlighted.

**Dr CHANT:** Yes.

**The Hon. RICK COLLESS:** So that we can see that information.

**CHAIR:** Perhaps you could go back to those people and ask their permission in the light of our inquiry?

**Dr CHANT:** Yes, we would be happy to go back to them and we would be happy to give you a full copy of the report on that basis.

**(The witnesses withdrew)**

**ELIZABETH CORBYN**, Director General, Department of Environment and Climate Change, PO Box A290, Sydney South 1232;

**CHRISTOPHER ALAN WILSON**, Executive Director, Department of Planning, GPO Box 39, Sydney 2001; and

**CRAIG JOHN LAMBERTON**, Director of Specialised Regulation, Department of Environment and Climate Change, PO Box A290, Sydney South 1232; affirmed and examined:

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

**Ms CORBYN:** Yes.

**Mr LAMBERTON:** Yes.

**Mr WILSON:** Yes.

**CHAIR:** If you should consider at any stage that certain evidence you wish to give or documents you wish to tender should be heard or seen only by the committee, please indicate that fact and the committee will consider your request. Before questioning commences, would all or any of you like to make a statement? Please feel free.

**Ms CORBYN:** The Department of Environment and Climate Change, which incorporates the Environment Protection Authority, primarily has a regulatory role in relation to the clean up of land at Nelson Parade in Hunters Hill. We are not the proponents or the planning authority, but we are working with both on a strategy that will positively clean up several types of contamination affecting the area. Our regulatory role mainly comes from the fact that the Department of Environment and Climate Change administers three pieces of legislation: the Radiation Control Act 1990, the Contaminated Land Management Act 1997 and the Protection of the Environment Operations Act 1997. All of them have some role to play in the clean up of these sites. I want to give some background to our role under these three pieces of legislation as context for responding to the inquiry.

As background, the Environment Protection Authority assumed responsibility for the administration of the Radiation Control Act in 1992 when the Government transferred the role of regulator from New South Wales Health to the Environment Protection Authority. This Act is essentially about the safe use of radiation in the community. Principally, it is about industry and medicine. For example, it provides that radioactive sources and x-ray machines must be registered and users must be licensed. But relevant to this inquiry, the Radiation Control Regulation specifies the annual dose that an individual can receive to minimise their exposure from activities that are regulated by the Act. It is important to recognise that radioactive elements are ever present in the natural environment. We think it is important for the committee to have an understanding for context of how the limits are used and the differing terminology. We are happy to try to help in that regard.

These differ by circumstance, whether you are inside or outside, the background levels, whether exposure is short term, such as for workers or in areas where people do not go very often, or whether it is inside the house where people are living full time. The current dose limits in New South Wales date from 1993, when they were included in the Radiation Control Regulation. They are consistent with international commission for radiation protection standards and also those adopted by the Australian Radiation Protection and Nuclear Safety Agency.

We believe that the strength of the radioactive material at Nelson Parade is relatively low by comparison with the radioactive substances used in medicine and industry and licensed under the Act. We consider that the public dose limits in the regulations are a suitable yardstick to assess the need and adequacy of the proposed remediation of contaminated soil at Nelson Parade in relation to radioactive material.

I would like to talk briefly about the Contaminated Land Management Act. It is the second piece of legislation that is relevant. It was introduced in 1997 to provide a regulatory framework to address contamination that requires intervention where there may be a significant risk of harm to either human health or the environment. Addressing such a risk can be dealt with by different strategies depending on the

circumstances. They could be removing the contaminated materials, encapsulating them onsite or mitigating their impact.

The required remediation outcomes in general are determined by a comprehensive risk analysis using nationally agreed standards where those standards exist. In Sydney we have a number of historical legacies of past activities, whether it be old industrial operations such as that which occurred at Hunters Hill at the uranium smelter, or reclaimed foreshore areas around the harbour, which sometimes had industrial slag used as fill. Where historical contamination is not presenting an unacceptable risk in its current circumstances—and by that we mean it is not migrating off site or is contained so that people are not exposed to unacceptable levels by the standards of the day—the required management action for remediation is determined generally through the development consent process under the land use planning legislation. In this case the Department of Planning is the consent authority.

If the Department of Environment and Climate Change has determined that there is a significant risk of harm, we can declare a site as a remediation site to ensure that there is transparent regulation and the Contaminated Land Management Act was established to help us all with a scheme to accredit an independent expert site auditor who will review the adequacy of the proposed remediation strategy and sign off that the required clean-up standards have been met. These site audit statements are submitted to the planning authority and/or the Department of Environment and Climate Change at the completion of the remediation. The Department of Environment and Climate Change has declared the foreshore lands adjacent to Nos 7, 9 and 11 Nelson Parade as a remediation site under the Act particularly because of cold tar and hydrocarbons that have been used as fill. This means that the department will regulate for the required remediation outcomes through either an approved voluntary remediation agreement or a remediation order.

We declared the residential blocks at Nos 7 and 9 Nelson Parade as unhealthy building land in 1993 under a repealed piece of legislation—the Unhealthy Buildings Lands Act—to ensure that it was not built on unless it was first cleaned up. But we have not declared either site as a remediation site under the Contaminated Land Management Act because they have been covered and vegetated, they are not being used and they have been fenced off.

In relation to the radioactive contamination in its current varied covered, vegetated and fenced arrangements at Nos 7 and 9 it has been our assessment that they do not represent a significant risk of harm in their current uses and as such remediation would be regulated by the conditions of any development consent that would be issued by the consent authority. In 1992 and 1993, following remediation work done by the then Department of Public Works, the radiation health branch assessed that no further remedial action was needed at those sites because all the measurements that they had were below the relevant limits set by the National Health and Medical Research Council at the time.

I come back to the present. For the proposed remediation to be done at Nos 7 and 9, the Department of Environment and Climate Change has provided input to the Department of Planning on the required environmental assessments that must be undertaken and in due course the conditions and outcomes that must be met. At the conclusion of that cleanup, the Department of Environment and Climate Change will review the independent site auditors' report and determine whether the relevant conditions have been complied with.

The third piece of legislation that we administer is the Protection of the Environment Operations Act. Under this Act we set environmental performance standards, licensed landfills and transporters to receive and transport the various approved forms of waste.

The waste that landfill can receive is determined by the engineering standards of the landfill, its development consent and the classes of waste that it can receive under the EPA licence. For any particular form of waste, the waste classification guidelines specify both the acceptable contaminant and set maximum levels for those contaminants. We recently revamped the waste classification guidelines and they are progressively being put on our website. The waste classification guidelines involving radioactive material, which are relevant to this inquiry, were originally set in the 1990 guidelines and have been republished most recently as part 3 of the waste classification guidelines. In some cases waste may need special treatment, such as immobilisation, before it can meet the required performance standards. So we expect excavated material to be assessed according to established guidelines and then disposed of or stored according to the regulatory requirements.

In conclusion, we think the proposal that NSW Health has to remediate this area is actually a positive step. Radiation is a subject matter that brings out the fear factor in people, often when it should not. In reality,

we think most of what we are dealing with on this site is low-level radioactive contamination that needs to be dealt with very carefully. But it should not, hopefully, scare people. From our perspective, it is important to do the next stage of remediation. It is an opportunity to remediate the properties and the foreshore areas to an acceptable level for both people and the environment and to minimise any future exposure to radiation or other contaminants. It will let these sites be cleaned up so that they will not be alienated from future beneficial uses. From our end, we have a much better regulatory framework in place through the Contaminated Land Management Act and the Protection of the Environment Operations Act, which were both passed in 1997. We have 10 years of experience in using them to control pollution and to affect site clean-ups. Craig Lamberton, who has already introduced himself as the Director of Specialised Regulation and is also the Chair of the Radiation Advisory Council, is here to help me answer questions that Committee members may have.

**CHAIR:** Thank you.

**The Hon. ROBERT BROWN:** On a point of clarification, that was a fairly good opening statement that covered a lot of ground but in the middle part you talked about the Contaminated Land Management Act and mentioned at one stage that remediation could take place either on a voluntary basis or via a remediation order. I noticed that you dropped No. 11 into your comments.

**Ms CORBYN:** No. 11?

**The Hon. ROBERT BROWN:** Land lot No. 11. You referred to 7 and 9 pretty much all the way through, and then you referred to No. 11.

**Ms CORBYN:** On the foreshore land. What we have declared as a remediation site is the foreshore land for 7, 9 and 11.

**The Hon. ROBERT BROWN:** I just wanted to confirm that. Thank you.

**The Hon. HELEN WESTWOOD:** Ms Corbyn, you referred to your department's view that the current uses of 7 and 9 do not present any risk to public safety. Given that, as I understand it, they are zoned for residential purposes, do you think they would be appropriate for residential purposes? If there were an application to build homes for habitation, would you—

**Ms CORBYN:** No, we declared them unhealthy building land previously. There is not anybody actually living on the site so when I talk about current uses that is not the zoning, it is what is actually happening on the site itself. We would have an expectation that they would need to be remediated before there would be residential uses on the site.

**CHAIR:** Would you include lot No. 11?

**Ms CORBYN:** In the remediation process we have just been looking at the proposals that were coming in from the Department of Health for 7 and 9—although Craig can probably comment, and we certainly have looked at what the circumstances are on No. 11 as well.

**Mr LAMBERTON:** We are legally constrained to comment on a proposal that has come to us, which is for 7 and 9 and the foreshore lands of 7, 9 and 11. The only way we would have any regulatory leverage on No. 11 was if that land was to be a significant risk of harm, and then we would be obliged to, first of all, pursue the polluter—which is the Radium Hill Company, which is long gone—and then after that we are obliged to pursue the owner of the land. So we could, if it was established that land represented significant risk of harm, go through the regulatory process on the owner of No. 11. We have also discussed with Health, though, the practicality of, whilst removing potentially a large amount from 7 and 9, there may be some functionality in looking at what could be easily addressed in other adjacent lots—even though from a hard regulatory line it may not be possible to establish that there is a regulatory requirement to do that. But it might be good sense, and that is what we have suggested.

**The Hon. LYNDA VOLTZ:** Although the Department of Health has been a previous owner of No. 11 and, with remediation issues, it can go back to previous landowners, can it not?

**Ms CORBYN:** Actually the way the Contaminated Land Management Act works is it sets up a hierarchy, and it is the polluter and then it is the current owner. It goes in order.

**The Hon. LYNDA VOLTZ:** So it does not go to a previous owner.

**Ms CORBYN:** Not if they want the polluter.

**The Hon. LYNDA VOLTZ:** Given that they purchased it because of its pollution.

**Ms CORBYN:** That is the way the Act is framed.

**The Hon. LYNDA VOLTZ:** I understand what you are saying.

**CHAIR:** So there is no responsibility on the Department of Health at the time, given that it sold the land and there is some argument about whether appropriate notification was given in light of its history and the current owner has unwittingly got something they were not bargaining for.

**Ms CORBYN:** In terms of the Contaminated Land Management Act, which is really just about the remediation process, it sets out the hierarchy, which would be the polluter and then the current owner.

**Mr LAMBERTON:** To expand on that, that is certainly the regulatory case. It is not to say, though, that at law there may not be a dispute between owners about their relative contributions. But that is not a domain we can intervene in. We can only intervene where the law allows us, and that is the current owner—unless you are a polluter, in which case it would have to be established that Health was a polluter, which does not appear to be the case.

**CHAIR:** Mr Lambertson, given your knowledge of wielding the Geiger counter—

**Mr LAMBERTON:** You were pretty good with it.

**CHAIR:** I was just an apprentice on the day. You might be aware that there is some dispute or lack of complete understanding regarding the radiation existing on site 9 and its proximity to 11 and whether the radiation is trespassing in some way. The inquiry has heard evidence that radon has not been tested. Yet radon emitted from 9 could be accumulating on 11. So is there not a responsibility on Health or your department in terms of the trespass of contaminants such as that to lot 11?

**Mr LAMBERTON:** I think there is no doubt that No. 9 is contributing some external radiation to the boundary of No. 11. But, as we saw on the day, it drops back very fast as you move away from the boundary. I do not think that is in doubt. What is not clear, however, is how much of that ambient level that you measure on the boundary is from No. 9 and how much is from No. 11. Certainly, we have been forward looking on this and said, "Well, if you remove the contamination from No. 9 that can only be a good thing".

**CHAIR:** We all agree with that. But it may not resolve the problem for 11. Further to that is the issue of the movement of radon gas that is potentially coming from those deposits on 9 and that could have a significant impact on 11 and has historically potentially led to the owners being unable to sell and vacating the premises.

**Mr LAMBERTON:** I guess there is a theoretical and an empirical response. We know that in 1977 radon monitoring was done on 5, 7, 9 and 11. The former houses largely, except for 7 and 9, were there and they found that except for No. 7—which I think the Department of Health discussed before—it was either undetected or it was well below contemporary standards.

**CHAIR:** Would that be well below current standards?

**Mr LAMBERTON:** That is right, yes. Those standards have not changed. In fact, it is probably no different than you might find in this room because radon evolves from the soils and the bricks that buildings are built from. It is not so much a problem in Australia but it is certainly a big problem overseas because of the different geological make-up of the rocks.

We know that when they measured for it, they did not find any on No. 11 in the past. That is not to say it would not be prudent, and our advice is that they should look at the conclusion of remediation to see that they have actually achieved all the outcomes. They can be confident then into the future that there is no radon

problem. But right now we are relying on the fact that previous monitoring showed, except for No. 7 and we know why that had elevated readings, that it was not in the house. A house has the ability to concentrate material because it does not blow away. Out in the great outdoors, any radon that evolved from the radium would be very quickly dispersed. It is buried below the ground. It is not like it is streaming out of a stack or something.

There is a reference I read somewhere that says that, first of all, to have radon, you have to have radium. If you have radium, you can measure it with your monitor. So when you walk around with the monitor and you can see elevated external radiation, that is saying, okay, there is some radon there, and therefore, where there is more radon, potentially radon can grow and radon can evolve. The rate of radon evolution is in the order of about one ten thousandth of a millilitre of gas, which is pretty small, every hour per gram of radium. We know this from the historical records of what was processed on the site. There is less than half a gram of radium on the entire site—on all of those blocks put together. There is less than half a gram. So that means that the amount of radon that is evolving is very low.

**CHAIR:** In terms of the radon levels, what is considered to be a safe level of inhalation of radon?

**Mr LAMBERTON:** There is a national standard. I think it is 200 becquerels per cubic metre and, you know, typically at my home, it is 50. It varies through the community. I am aware that the Australian Radiation Protection and Nuclear Safety Agency has done a fairly extensive survey across Australia. Of course it is a contemporary issue, particularly overseas. It varies, but 90 per cent of houses are of that kind of magnitude. I am not trying to say that radon is not an issue that we should follow up on. Our advice is that part of the remediation should actually measure that. But measuring today does not achieve much because it really has not changed in situ for the last 20-odd years. The measurement at the time showed there was no radon hazard at the time, but it would be useful, if you like, to confirm the theory with the practice at the conclusion of the remediation to make sure that in fact you have met the outcomes, which is no radon hazard.

**CHAIR:** Ms Corbyn, you mentioned the consent authority. Is this under part 3A? Therefore the Minister for Planning is actually the consent authority on this whole project? Does the council have any say in the matter?

**Ms CORBYN:** I would have to let Chris Wilson answer that.

**Mr WILSON:** The council obviously would be consulted. It is a part 3A, Mr Chairman. The reason it is a part 3A is that under the major projects legislation, a site that is declared a remediation site and requires consent under key principle 1 of State environmental planning policy [SEPP] 55 requires the approval of the Minister. It is only by the fact that the foreshore land had been declared a site under the Contaminated Land Management Act and therefore requires our Minister's approval that it is a major project.

**CHAIR:** Ms Corbyn or perhaps Mr Lambertton, in terms of regulations relating to the disposal of waste, particularly the cut-off levels for industrial wastes, what are we dealing with on site? Is it low, intermediate, or high level radiation? Could you explain that to the Committee?

**Mr LAMBERTON:** It is low, in that analogy of low, medium, high. I mean, high applies to things like fuel rods, which are outrageously hot.

**CHAIR:** Sure.

**Mr LAMBERTON:** Medium applies to the kind of things you see in hospitals. That is used for diagnostic purposes. Low is the kind of levels at Hunters Hill. In fact, they are low such that they do not require to be regulated as radioactive substances. We are managing this as contamination as if it was any other chemical contaminant.

**CHAIR:** Therefore, could you describe the sort of recipient waste facility that this sort of material could be delivered to? How legally can that be delivered? Are there restrictions on transporting that sort of material? Are we considering this to be industrial waste only?

**Mr LAMBERTON:** Okay. Of course, the material that would come from Hunters Hill has two components—its radiological component, and its chemical component. We have been given initial data, which of course is not the complete picture but it is almost like a bit of a scoping exercise, to see what can be done.

The data we have received so far shows that the radiological material would be classified as restricted solid waste, or industrial in the old parlance, whereas the chemical contamination from those polymeric hydrocarbons, tars and heavy metals would need to be treated, probably, before it can be disposed of as industrial waste so it can become the next step, if you like, in terms of disposal.

**The Hon. RICK COLLESS:** This is the stuff on the waterfront land?

**Mr LAMBERTON:** That is right, yes.

**CHAIR:** Also the radioactive material—the radioactive sand and material on the site itself—say, on lot 9 that we observed with the Geiger counter—

**Mr LAMBERTON:** Yes.

**CHAIR:** —could you explain where that is up to, and what sort of treatment would have to occur to that material before it could be transported?

**Mr LAMBERTON:** The proponent would need to actually monitor what it was, as they are going to make sure it complies with the limits. There are standards that we use in our waste assessment guidelines. They use two key factors: What is the absolute mass of radioactivity, in the soil in this case, that will be disposed of? The cut-off for that for radium, which is one of the more stringently regulated materials, is 40 kilobecquerels. To give you a bit of a feel for that—a smoke detector that you might have in your home, or should have in your home, is 37 kilobecquerels. That is saying how much total radioactivity is there.

But the other thing that it needs to meet is also the concentration: How many becquerels a gram? Otherwise buildings would be radioactive substances because they contain small trace amounts of radium and other materials. It is not just how much radiation is there, but what is its concentration? A brick would not be classified as radioactive waste, even though it does contain small levels of radium. For the soil to go to an industrial waste landfill, it must pass two criteria: the total amount of activity in the soil, and the concentration of activity or how many becquerels, the unit measure of radioactivity, are in the ground or soil. It would need to pass both of those tests.

**Ms CORBYN:** There is a requirement for assessment of the waste once it is in the remediation process. That classification actually has to occur before you can determine really, ultimately, what it is.

**CHAIR:** Essentially you would be able to, say, shandy-down the waste, if you like—mix it with more inert sand, for example—to bring it to a level where it was acceptable as industrial waste for transport.

**Mr LAMBERTON:** Well, we have been around for a while and we know this game, so we are aware of that. That is not an acceptable measure. It is like the expression "dilution is not a solution to pollution". It is something that we are mindful of. That is not an acceptable way of complying with the standards. But in reality, remember that most of the material is 400 milligrams, which is half a gram of radium for the entire site. If you take out a thousand tonnes of soil, it is going to be fairly diluted with the soil that it is surrounded by. Over the years, people have dug it up and moved it, and it has been dispersed and covered over, and it has been moved around quite a bit.

The initial data that we have been given, which is almost like a scoping that people have been working up on behalf of Health, is that it would comply with these guidelines. But of course our role is to make sure that they actually do comply. Really, that is tested on the data. If you have a survey to demonstrate that this is feasible—otherwise we will not give you our approval—then when you actually get that approval because you have demonstrated that and your sampling regime shows that it will comply, we will audit to make sure that it actually maintains compliance with those standards. If it does not comply with those standards, you cannot take it to that landfill. That landfill would be breaking the law if they accepted it. Landfills being what they are, they are not interested in putting their licence at risk and their very substantial business at risk by breaking these requirements.

**The Hon. RICK COLLESS:** Mr Lambertson, going back to the half a gram of radium that is on the site, have you done any estimations of how much uranium is there?

**Mr LAMBERTON:** Uranium?

**The Hon. RICK COLLESS:** Yes.

**Mr LAMBERTON:** No, I have not.

**The Hon. RICK COLLESS:** Is it likely that there is uranium still there?

**Mr LAMBERTON:** Oh, there certainly would be.

**The Hon. RICK COLLESS:** Right.

**Mr LAMBERTON:** I can expand, if you like.

**CHAIR:** Please do.

**Mr LAMBERTON:** Of course, this was uranium ore that was taken from South Australia 100 years ago, and of course none of us were around at the time to know exactly what happened.

**The Hon. RICK COLLESS:** That is right.

**Mr LAMBERTON:** But they extracted the radium because that was the material that was valuable for the luminescent dials and things, but it is only a very small proportion of the overall components of uranium ore. Uranium ultimately is decaying to stable lead, and on the way it goes through about 20 different substances, one of which is radium.

**The Hon. RICK COLLESS:** Is one of them radium?

**Mr LAMBERTON:** I am sorry?

**The Hon. RICK COLLESS:** Is one of them radium?

**Mr LAMBERTON:** One of them is radium. Radium is the one that becomes the most significant, if you were looking at it from a public health or environmental risk point of view. Some of the others do not have any role. But radium is just so far ahead in terms of its implications that if you manage for radium then you are managing for everything else.

**The Hon. RICK COLLESS:** But if uranium is still there and it is degrading to radium, how can you say whether there is only half a gram of radium on the site? Is it not likely that as that uranium degrades there will be more radium there?

**Mr LAMBERTON:** Yes, technically, but it is a case of: it will happen over a geological timescale. One of the reports estimated that—

**The Hon. RICK COLLESS:** But we can assume that Hunters Hill is going to be populated for quite a few years to come, can we not?

**Mr LAMBERTON:** That is right. In 1,000 years time there might be 50 per cent more. One of the reports—I think the Scott report—noted that since 1910 until the 1970s they thought that the amount of radium that had ingrown, that had come back from decayed other products, had increased by 2 per cent. So certainly it has gone up, but 2 per cent in 60 years is not really changing the overall picture.

**The Hon. RICK COLLESS:** What will it be in 500 years then?

**Mr LAMBERTON:** He would have to do the maths—

**The Hon. RICK COLLESS:** It is more or less a constant rate?

**Mr LAMBERTON:** Yes. And that is why it needs to be managed with that eye for the future. Which is why the suggestion that it be moved from Hunters Hill to somewhere that is actually set up to do that, in our view, is a positive step for the environment and for the public.



**The Hon. RICK COLLESS:** Turning to lots 7 and 9, when the demolition of those properties occurred there, what role did the EPA have in that? Did you or the department have any oversighting role in that?

**Ms CORBYN:** The EPA was not established until 1992.

**The Hon. RICK COLLESS:** So it was the State Pollution Control Commission?

**Ms CORBYN:** The health department would have had responsibility for the radiation control—

**The Hon. RICK COLLESS:** We are running around in circles here, because the health department told us that you would have control of it.

**Ms CORBYN:** We took over the radiation health—I should say we provided it to the EPA in 1992. The EPA did not exist then, so it would have been the radiation health branch, which was within the Department of Health at the time.

**The Hon. RICK COLLESS:** What I am getting at is that on the demolition of those two properties, and certainly in lot 7 in particular, there was radioactive material in the building itself. In particular, the mortar between the bricks was made from the radium sand, and that was of concern. Where did that material go when the buildings were demolished? Does anyone have any record of that?

**Mr LAMBERTON:** No. We do not know anybody who was involved in that personally to get first-hand knowledge. The records talk about it being removed and placed elsewhere, but we do not know precisely where it went to.

**The Hon. RICK COLLESS:** This stuff could contain significant amounts of radium, could it not?

**Mr LAMBERTON:** It was tailings, so it had been depleted of radium.

**The Hon. RICK COLLESS:** But half a gram on the whole site is significant. A very small amount still within the demolished building materials has gone somewhere, and nobody knows where it has gone.

**Ms CORBYN:** We make some assumptions that most of the material stayed on the site, because the remediations that were done were to try to consolidate on 7 and 9. One of the assumptions we have made is that some of that material would have stayed on site.

**The Hon. RICK COLLESS:** Some of it would have, but a lot of it probably went off site. That would be a fair assumption to make, when you have a shovel loading stuff into a truck.

**Mr LAMBERTON:** We do not know for sure because, as I said, we were not there. But we know that the general philosophy of that site has been, where neighbours have removed material onto what has long been known to be the most contaminated sites, which are 7 and 9, and the health department has moved material from adjacent lots, probably in a more managed way, to 7 and 9. So the overall philosophy that everyone has been using—whether it be neighbours, the health department, commerce, or anyone on their behalf—is to move materials and to stabilise them on 7 and 9.

**The Hon. RICK COLLESS:** But the building materials are not there, are they?

**Ms CORBYN:** We do not know the answer to that until the remediation actually occurs.

**The Hon. RICK COLLESS:** If it has gone off site somewhere, it is a little worrying to think that all this potentially radioactive material is being transported somewhere.

**Mr LAMBERTON:** I expect that whoever was supervising the job—a job of that scale—would have the requisite skills to make sure it was being handled correctly.

**The Hon. RICK COLLESS:** You would think there would be some record of it.

**Mr LAMBERTON:** Well, it is 17 years ago.

**The Hon. HELEN WESTWOOD:** Referring to the department's submission from the whole of government, item 11 refers to the fact that when it was built in 1967 there was extensive excavation. I am assuming there is little knowledge about that, as there is about others. Has the same assumption been made? Having visited that site, you can see that it has been taken back to what I assume is a sandstone wall there. Is the assumption that those soils, which were possibly contaminated, have gone onto sites 9 and 7, which may explain why the contamination is not as great on site 11 as it is on sites 9 and 7? Or is there another explanation for that?

**Ms CORBYN:** Certainly our assumption from the documents we have available to us is that remediation was actually undertaken and consolidated on sites 9 and 7.

**The Hon. HELEN WESTWOOD:** It was built back in 1967, which is when remediation took place, is that correct, or were they remediated before then?

**Ms CORBYN:** I think the Department of Health did not discover the issue until 1965 or 1966.

**The Hon. HELEN WESTWOOD:** So the excavation of those soils that took place on site 11 may have gone onto sites 9 and 7?

**Mr LAMBERTON:** It is hard to know where materials went to. In a sense, we have approached this in a broad way to say: What happened in the past is useful and instructive, but it is really what is there now and what needs to be done with it that has been the focus of our agency. We do not have personal knowledge of what happened in the past; our focus has been: let's fix the problem. To the extent that surveys help us understand what is there and what needs to be managed, that is useful.

**The Hon. HELEN WESTWOOD:** One of the things we as a Committee have been discussing is: If the contaminated soil was taken to other sites, it would be good to know the location of that if it did present any risk to public safety. So it is in that vein that I am asking those questions. If we can be confident that it has been placed on those other sites, that is great; if not, do we know where else it might have been deposited?

**Ms CORBYN:** I think one of the challenges is that the site would have been available for people to do things on all of these sites—available for people to do things from 1960. But certainly in the documents we have and the studies we have seen done from the 1970s through to the 1990s, there was clearly an intent to try to consolidate and recognise that as remediation occurred from there, if it was done from a government perspective by public works or others, that they were wanting to try to consolidate—not spread it more widely, but actually consolidate it so they knew where the material was.

**CHAIR:** What would be the trigger to favour maintaining it on site?

**Ms CORBYN:** Probably the standards of the day.

**CHAIR:** In the standards of today, I am talking about the strategy to remediate that is upcoming, rather than in the past it has been seen to be appropriate to consolidate it on site. Is there a possibility that the material would be best left on site?

**Ms CORBYN:** What we would want to do is to see what the remediation plan says, and understand what the materials are and then the strategy for that. You would have to ask Health what its motivation was, rather than us.

**CHAIR:** Do you have a role in monitoring radiation levels in terms of contamination under the purview of your Act? Is the Contaminated Land Management Act your area? Would you not take a role in assessing that?

**Ms CORBYN:** Basically the Contaminated Land Management Act has people reporting sites to us and then us determining whether we consider there is a significant risk of harm and whether regulation needs to occur. We work well with the Department of Planning if we think there is a change in use that might affect that determination. Then we do things either under the planning process or under our remediation requirement. From our perspective, sites 7 and 9 in particular were material consolidated, they were capped, they were vegetated and they were fenced. There was not public exposure, which benefited from our regulatory perspective. That

means we have not determined it to be a significant risk of harm. As long as it stays in that manner, it would not trigger our involvement.

**The Hon. ROBERT BROWN:** I ask a point of clarification. Does that also apply to the other materials, the other contaminants, non-radioactive, that are on the waterside land? Would your department recommend that they should be remediated anyway? Or does the same thing apply? Irrespective of the radioactive material, does the waterfront land have to be cleaned up?

**Ms CORBYN:** That is correct.

**The Hon. LYNDA VOLTZ:** Mr Lamberton, in 1989 the Department of Health wrote to the council regarding No. 11, giving it a clear certificate. Based on that, the council moved a 149 on the land, which notifies people of the contamination issues. You may not know the answer to this, but do councils have to act under State Government departments issuing those certificates?

**Mr WILSON:** We do not issue section 149 certificates.

**The Hon. LYNDA VOLTZ:** No, the Department of Health issued a section 55 certificate stating that the land was clear. Based on that certificated issued to the council, the council removed the 149 notification on the land.

**Mr WILSON:** Yes.

**The Hon. LYNDA VOLTZ:** Are they required to move it once they receive a section 55 certificate?

**Mr WILSON:** I cannot answer that. I am not sure what level of information was given by Health to the council. The regime has changed recently and now the SEPP 55 guidelines give clear indication to councils of how they should act in relation to section 149 certificates and the remediation of land under a range of different land planning decision processes. I am unaware of what was behind council's decision. I cannot answer whether they were required to lift it or not.

**Ms CORBYN:** When we were working out the guidelines for SEPP 55 we had much discussion about section 149 certificates. There are two different types, there is section 149 (2) and 149 (5) which provides information but in different ways. In particular the 149 (5) certificates have traditionally been used to identify contamination. I have seen that there was a 149 certificate issued by council in about 2001. It actually identified the slag, that there were contaminated sites. There was a question asked as to whether it was subject to contaminated land management; it said yes, so please contact the council. It is not our role, but certainly we do try to understand what kind of information councils might use. We have a requirement where there has been a declaration or a lifting of a declaration under the Contaminated Land Management Act to inform council of those things.

**The Hon. LYNDA VOLTZ:** I wonder how it came to the point that in about 2001 someone purchased a house without being aware of the situation. Obviously, there had been some recent remediation on the house, following on from the 1987 Sinclair Knight report. That may have been where the situation arose.

**Mr WILSON:** Responsibility of our department is that SEPP 55 is now a State policy. We are obliged, under our legislation, to tell councils that that should be on their notation. If you buy a house you should have the EPI that is applicable, and SEPP 55 would be one that applies to the State. That gives the vendor, or the purchaser, the need to look into that a bit further. SEPP 55 and the guidelines give a tiered approach to how to deal with potential contamination and remediation on any site. Obviously that was not applicable then. What was the date?

**The Hon. LYNDA VOLTZ:** 1989.

**Mr WILSON:** No, not in '89.

**CHAIR:** Mr Lamberton, I am concerned about the amount of radium that is likely to be on the site. In the 1915 works report, there was a calculation based on 3,000 tons of uranium ore that was delivered to the site, grading about 1 per cent uranium oxide, that gives about 21 grams of radium. Even allowing for lower tonnage or grade, a figure of half a gram of radium is not appropriate, I contend. If that is the case, we may well be

dealing with far higher levels of uranium oxide and other radioactive materials on site than we expect. Is that a reasonable possibility?

**Mr LAMBERTON:** Like a lot of things, we are speculating. We are making informed judgements and trying to form a conclusion. The figures I am quoting are from the Scott report of 1977. I have not gone back to 1915 records because it does not really influence our role particularly.

**CHAIR:** Unless the levels are sufficiently high to make transport, for example, prohibitive?

**Mr LAMBERTON:** Yes. What matters is what is there now and that is determined firstly by soil samples. The coloured plate that the Committee had today showed the 1987 sample; that was as a result of 250 soil samples on 139 sites. That shows what they can get. That is a structured plan to try to locate where it is. Whether there is half a gram, which is the estimate that Scott applied in 1977, or whether it is 10 times as much, it is really what is there now that matters to us, and what is its concentration and its activity and how does that compare with the contemporary standards of what is acceptable to be disposed of as landfill. I know exactly how much radium is on that site. To give an order of feel for it, Scott felt that it was of the order of 400 milligrams, less than half a gram.

**CHAIR:** Is it reasonable to assume that that type of material would be transported to the Castlereagh site?

**Mr WILSON:** It cannot go to Castlereagh. It is not operating as a landfill.

**CHAIR:** Where is the material likely to go?

**Mr WILSON:** It would need to go to a landfill that met the classification criterion allowed it to take it. For the chemical components it is likely to be industrial waste.

**CHAIR:** Would that be the Lidcombe waste depot?

**Mr WILSON:** No, it could not go there.

**CHAIR:** Where would it go? Was it chemical waste from a carbolic acid originally?

**Mr LAMBERTON:** Yes, that is right, coal tar. They are the most difficult to deal with. They will need treatment before they can be disposed of.

**The Hon. ROBERT BROWN:** On site?

**Mr LAMBERTON:** Probably not on site. It would probably be taken for treatment. That is not an uncommon problem, it is gasworks waste that is used quite regularly. There is immobilisation approval that exists that involves mixing it with cement and forming basically a concrete block, which means that it cannot leach out of that block. So once it is met, and there is a certain performance criterion, it has to have certain compressive strengths so it will not crack; once it meets that criterion that requires our specific approval. We would need to issue an immobilisation approval for that material. So the proponents, in this case the consultants, would need to demonstrate to us that they could meet those standards. If that were done, they could demonstrate it and when they actually achieved that it would be approved to go to a landfill that accepted restricted solid waste.

**CHAIR:** Does your department have any strategy regarding moving it off site, dealing with it by truck? It has been suggested that it be barged out of the area. Are there pros and cons of those strategies from your department's perspective?

**Ms CORBYN:** Not yet.

**Mr LAMBERTON:** The way the process works—otherwise we would be telling everyone how to do their job—is they need to come back with a proposal that is approved by the consent authority. We will provide advice to the consent authority on matters, for example, of the pros and cons of removal via barge on the water or via land. On the one hand, if you take it by road that is with trucks through the local streets—and they are fairly narrow streets—but it might be quicker and people are disturbed for less time than taking it out by water.

We do not see there is any reason why it could not be taken by water but we are not the design engineers—that is a possibility. You then need to follow the whole train: if you took it be water how would you contain it? What is the risk of doing it that way? Then you have to unload it. So maybe it is more handling. You would need to weigh up: do we have a simple process that might be quicker—and there are vehicles that are completely contained so it is suitable for transport—versus a more complicated group that might offer less distraction and less disturbance to the local community but has more potential areas for weakness in the process? We do not have a firm view on that.

**Mr WILSON:** That is something that probably lies with planning when it is assessing the environmental application. We would need to balance the impacts of both modes of transport. We would take advice from the Department of Environment and Climate Change and NSW Maritime—there might be navigational issues. There would be a broad range of issues we would need to look at in terms of that specific issue as well.

**CHAIR:** Are you saying the Department of Planning is the determining agency at that point?

**Mr WILSON:** In terms of that matter, yes.

**Ms CORBYN:** We actually licence transporters. If trucks transport them, they would need to be driven by people that were licensed by us.

**Mr WILSON:** I think NSW Maritime would probably licence the barges but I would have to check that.

**The Hon. ROBERT BROWN:** Are the people doing the actual physical work of extracting the material and loading it onto the trucks also licensed?

**Mr LAMBERTON:** No, we do not licence them but, again, one of the issues that we would be concerned about—and WorkCover also, who we have discussed with briefly—is to make sure that the people who are doing the work—who are the people who would be theoretically most at risk if there was a problem—are appropriately protected. One of the requirements of the proposal they would need to be backed for approval is how they are going to ensure that.

**The Hon. ROBERT BROWN:** So they would not be licensed like asbestos removal contractors, for example?

**Mr LAMBERTON:** No, but it may be in practice that if you wanted to engage people with the right skills set they are the kind of skill sets that you might need, because you have people proficient in personal protective equipment and how to contain contamination. It is not a dissimilar skill set or engineering requirements.

**The Hon. ROBERT BROWN:** Your department would be responsible for doing the monitoring and compliance checking to see that the process met the conditions you had set—in other words, the level of contamination in the material. Would you also be doing air or dust monitoring?

**Ms CORBYN:** We would normally require if it were us, but it may come through planning consent, that the proponent actually organises for monitoring to be done. But there is also an independent expert site auditor that actually has to confirm those things as well.

**The Hon. ROBERT BROWN:** On a project like that dust suppression would be a problem I would imagine?

**Ms CORBYN:** It would be something that would need to be done.

**The Hon. ROBERT BROWN:** So monitoring would need to encompass the dust itself, and if water sprays were used for dust suppression the runoff would also need probably need to be monitored?

**Mr WILSON:** All those issues would be covered.

**The Hon. CHARLIE LYNN:** Mr Lamberton, I understand that you declared the foreshore land to be a remediation site in August 2007 because of high levels of arsenic, lead and hydrocarbons. You did not mention radioactive waste in that declaration. Can you confirm whether or not that is correct?

**Mr LAMBERTON:** The declaration was based upon the chemical contaminants. That is not to say that there is not other radiological material, but that determination was based on the levels of particularly the PAHs in that soil. That is why the proposal we have at the moment is a bit of a comprehensive one that deals with both the chemical contaminants—which they must by law, because we have required it—and the radiological ones that are part of the package. It is therefore an efficient means of dealing with them all in one go.

**Ms CORBYN:** We think they are lower levels and, in fact, we were more concerned about the chemical contaminants.

**The Hon. CHARLIE LYNN:** I understand the Department of Health wants to classify the waste from Nos 7 and 9 as industrial waste. Do you think that is an appropriate classification given the extremely high levels of radioactivity that has been identified in certain parts of the waste?

**Mr LAMBERTON:** I do not think we think these are extremely high levels of radioactivity. Extremely high levels of radioactivity are things like ANSTO has. These are like smoke detectors—that is the kind of scale we are talking about here—so they need to be managed sensibly but they are not high or elevated like other sources in the community or certainly in the nuclear power cycle—that is high. These are relatively low and need to be managed in accordance with our requirements. Our role would be to make sure that occurs.

**The Hon. HELEN WESTWOOD:** Nos 7 and 9 have been declared as unhealthy building lands. There was a process that you went through for that. Have you gone through that process to look at any other sites in the street where concern has been expressed?

**Ms CORBYN:** This was done back in 1993, I think—I am not quite sure of my dates there—and I believe there was an additional look at No. 13. The Unhealthy Building Act was repealed, so it no longer is in existence, but I think there was some consideration of some other sites—I do not know how many—and I remember No. 13 was looked at from the documentation I have seen.

**Mr LAMBERTON:** Surveys were done—again in terms of compliance with the existing standards of the day—under the National Health and Medical Research Council Guidelines I think Nos. 5, 7, 9, 11 and 13—I think No.13 privately engaged someone to give them some results—in 1990, no sorry, 2000. So these have been surveyed and from the information in the various reports we have and from our submission it summarises what was found. Again it is clear that Nos 7 and 9 is where the issue is and the intersection with No. 11 is where the area is less clear—it is not as black-and-white as the other areas—but certainly there are small amounts of individual contamination on some of No. 5 and No. 13.

**The Hon. HELEN WESTWOOD:** Given that there is a great deal of community concern, and particularly in the last few months it has been blown up in the media again, is there a whole-of-government approach or whole-of-government strategy to managing this area, both in terms of perception and community concerns, and managing any public health risks?

**Ms CORBYN:** I could comment briefly but I think the Department of Health is actually running a community-consultation program associated with their proposals for remediation. I know that they have brought in people to actually help them do that community process. With Planning and ourselves we have joint guidelines because of our dual roles under both the planning legislation and the Contaminated Land Management Act, so we would approach that remediation process and the public consultation that would go around that—they come through the planning process—together. In that sense we do have a whole-of-government approach in that we work together in our various roles and responsibilities.

**The Hon. HELEN WESTWOOD:** Are you are satisfied with that approach? Do you think that it is meeting the community's concerns and meeting the statutory responsibilities of the various departments?

**Ms CORBYN:** I certainly think we are meeting our statutory responsibilities. Because of the community concern that is there, whether the communication is sufficient in the community I suppose is something I would have to hold judgement on as we go through the planning process.

**Mr WILSON:** From our perspective we believe the statutory obligations are being met at this stage but I guess the important thing we will be when the environmental application is actually lodged with the department and whether or not they have addressed the issues we have raised from a regulatory perspective. I am not quite sure when that is going to occur.

**(The witnesses withdrew)**

**(Short adjournment)**

**BRUCE DONALD GREEN**, Acting General Manager, Maritime Property Division, New South Wales Maritime, Level 11, 207 Kent Street, Sydney, affirmed and examined:

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

**Mr GREEN:** I am representing New South Wales Maritime as a landowner of properties adjacent to Hunters Hill.

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

**Mr GREEN:** Yes, I am.

**CHAIR:** If you should consider at any stage that certain evidence you may wish to give or documents you may wish to tender should be heard or seen only by the Committee, please indicate that and the Committee will consider your request. Before we commence asking questions would you like to make an opening statement?

**Mr GREEN:** Yes I would like to make a statement. New South Wales Maritime is the New South Wales Government's maritime regulator and generally owns the land below high water mark on Sydney Harbour, Parramatta River and some adjoining reclaimed land. New South Wales Maritime is the owner of reclaimed land adjoining No. 5 and No. 13 Nelson Parade, Hunters Hill—approximately 156 square metres or 70 square metres in area respectively. Reclaimed land adjoining No. 5 Nelson Parade is currently leased to the adjoining land owner. The reclaimed land adjoining No. 13 is not currently leased. The reclaimed land adjoining 7 and 9 Nelson Parade was transferred to the Health Administration Corporation of New South Wales on 21 April 1989. The reclaimed land adjoining No. 11 Nelson Parade was transferred to the adjoining owner on 26 November 1990.

In 1980 the New South Wales Government purchased No. 11 but retained the reclaimed foreshore land when the New South Wales Government sold the property in 1989. A review of the historic and current information held by New South Wales Maritime and the Department of Environment and Climate Change was conducted by the Department of Commerce. A review of the available information indicates that from investigations undertaken to date on the adjacent reclaimed land it cannot be concluded there is no contamination on the New South Wales Maritime reclaimed land. Those contaminants identified in the adjacent reclaimed sites include hydrocarbons, heavy metals including lead and arsenic, and low levels of radioactive material. No sampling or testing has occurred on the New South Wales Maritime reclaimed land to establish that contamination existed and/or exists in a significant risk of harm as defined under the Contaminated Lands Management Act 1997.

Some early investigations of radioactive contamination of the bay sediments, Scott 1977, concluded that further assessment and remediation of sediments in the adjacent bay were not considered necessary due to the relatively low risk, and this was prior to the Contaminated Lands Management Act. New South Wales Maritime has not been asked or required by DECC to investigate the land adjoining No. 5 or No. 13 Nelson Parade, Hunters Hill, under the Contaminated Land Management Act. The potential contaminations on the New South Wales Maritime reclaimed lands include hydrocarbons, heavy metals including lead and arsenic, and low levels of radioactive material. There is no ready information to suggest that the New South Wales Maritime sites have been remediated in the past or pose a risk of harm to human health or the environment.

At this stage it is not clear whether remediation of the New South Wales Maritime is warranted or would be required but New South Wales Maritime has reviewed historic and current information and consulted with DECC as appropriate. In February 2008 the State Property Authority approached New South Wales Maritime in relation to the proposed remediation of 7 and 9 Nelson Parade and reclaimed foreshore at 7, 9 and 11, seeking New South Wales Maritime's advice about the investigation of maritime's adjacent land to No. 13 and, if remediation is required, whether it would consider a joint remediation and sale with New South Wales Health. New South Wales Maritime has engaged consultants GHD to undertake testing. Contamination to be investigated includes those identified in the adjacent sites, high levels of hydrocarbons, heavy metals including lead and arsenic, and low levels of radioactive material. GHD will undertake soil sampling and laboratory testing for chemical and radioactive contaminants. Although radiation is not considered an issue on maritime



land, the scope of work includes radiation testing to confirm that this is the case with a gamma survey of relevant areas.

**CHAIR:** Does your department have any knowledge of soil or other waste from the sites being dumped over the foreshore either during the early days with the smelter plant or in the intervening period?

**Mr GREEN:** No, we are not aware of anything.

**CHAIR:** And the results you mentioned from your tests so far, low level radiation, what are the main issues from your perspective on those offshore areas?

**Mr GREEN:** We do not know what is in the offshore areas. What we do know is from an early study that it was a very low level of contamination but we do not know about the other contaminants. That was not tested at the time, as I understand it.

**CHAIR:** So the original industrial activity there, even prior to the radium smelter situation, the level of contaminant you are talking is similar to gas work contaminants. What is the best type of remediation that you could see being undertaken?

**Mr GREEN:** I think any remediation of our land, which includes the ends of 5 and 13 and the sea bed, would only be undertaken after appropriate advice from the authorities on the method of remediation. I am not a remediation expert so we would be taking advice from the appropriate people.

**CHAIR:** There has been some concern about dumping of fill over that area. Is there any evidence of that, irradiated materials over time, bags of irradiated material and the suchlike?

**Mr GREEN:** I think if you read in the reports that have been given to you from the Government there was talk about some radioactive material, some material that has been put behind the seawall in plastic bags, I think it was number 7.

**CHAIR:** Yes.

**Mr GREEN:** That is all I am aware of.

**The Hon. RICK COLLESS:** Mr Green, given your comments on the radioactive contamination in the harbour adjacent to these sites, I think you said you were not aware of any reports of what was in there, is that correct?

**Mr GREEN:** The report that we had, which I think was Scott 1977 said:

Some early investigations of radioactive contamination of the bay sediments (Scott 1977) concluded that further assessment and remediation of sediments in the adjacent bay was not considered necessary due to the relative low risk.

That is prior to the CLM Act. At that point in time what that is saying is that the level of radioactivity in the bay was not an issue.

**The Hon. RICK COLLESS:** Does that report describe what tests were done and how he came to that conclusion?

**Mr GREEN:** I have not read the report. Again, it is all the information that has been provided.

**The Hon. RICK COLLESS:** Is it of concern to you that there does not seem to be a great deal of knowledge about what is actually in the bay there?

**Mr GREEN:** I cannot comment on that. We recognise that there needs to be a holistic approach to the contamination area. We are in with the others to do the necessary testing to see what has to be done. You are going back over history here that I cannot comment on.

**The Hon. RICK COLLESS:** Are you aware that uranium ore from South Australia was unloaded in wooden barrels on that site?

**Mr GREEN:** I am not aware of that.

**The Hon. RICK COLLESS:** You probably also would not be aware that according to some eyewitness accounts at the time that any barrels that were split were kicked off the barges or wharves straight into the harbour.

**Mr GREEN:** I am not aware of that.

**The Hon. RICK COLLESS:** It is quite likely there is a substantial amount of uranium ore in the harbour there.

**The Hon. HELEN WESTWOOD:** What year is that?

**The Hon. RICK COLLESS:** It was operating from 1908 to 1915.

**The Hon. HELEN WESTWOOD:** And those witnesses?

**The Hon. RICK COLLESS:** They are not with us now, of course, but there were reports at the time.

**CHAIR:** It is a reasonable question from the point of view of the longevity of nuclear material.

**The Hon. RICK COLLESS:** Are you aware that government tests in 1965 showed radiation levels up to 12 times the background level there?

**Mr GREEN:** I have looked at the information that has been provided in the reports to you. That is the information I have.

**The Hon. RICK COLLESS:** There is an estimated 500 tonnes of radioactive material on the bottom of the harbour there. Is New South Wales Maritime intending to do anything about the material that is there?

**Mr GREEN:** As I said, what we intend to do is to do some testing and find out what is down there. Again, Scott in 1977 indicated that the radiation contaminants were not extensive.

**The Hon. RICK COLLESS:** What testing are you going to do and when will you be doing it?

**Mr GREEN:** We have engaged GHD to do the testings. They will be doing testings in accordance with the standards that apply. We are in the process of working out the schedules now.

**The Hon. RICK COLLESS:** That work has been commissioned and planning has started?

**Mr GREEN:** Yes.

**The Hon. RICK COLLESS:** There has been conjecture about moving the stuff that is there off site by barge—putting it into containers and barging it out. One of the concerns expressed to us is that the water there may not be deep enough for a barge. How deep is the water of those seawalls?

**The Hon. LYNDIA VOLTZ:** At the low tide mark.

**Mr GREEN:** I do not know. I will take that on notice.

**The Hon. ROBERT BROWN:** If it has not already been provided, would it be possible to get a copy of the full Scott report 1977? Does your department still hold that report?

**Mr GREEN:** I am not too sure where the report is. It would have been with the commerce commission. I will take that on notice and see what I can find.

**CHAIR:** Mr Green, do you have any concerns about the disturbance to the bay, for example, if the material is to be transported by water? Do you have a protocol that your organisation would look to or any restrictions on that type of activity in the bay there?

**Mr GREEN:** We would be taking advice from the experts on how the material is removed from the bay, how the material is barged, et cetera. Of course, we would be looking to make sure that our land is protected and the appropriate approach is taken. Certainly the Department of Environment and Climate Change [DECC] are experts and the consultant teams are quite good too.

**CHAIR:** Does your department have any experience in that type of activity, be it at Homebush Bay or any other areas around the harbour, to undertake an exercise like that?

**Mr GREEN:** We are involved in a couple of contamination exercises, one on the Hunter River and one at Homebush Bay. Again, we have the necessary expertise, not necessarily in-house but we know where to get the necessary advice to assist us in making sure that whatever is done is done appropriately and does not create a problem for us in the future.

**CHAIR:** Do you have any idea of the area that would need to be dealt with in terms of contamination and how to stop siltation transfer and such like with the disturbance that would be undertaken with the remediation?

**Mr GREEN:** There are methodologies available to do the work that would need to be done, if indeed it is proved it needed to be done. It is something we will have to consider once the testing is in and once we understand what the issue is, if indeed there is an issue.

**CHAIR:** Do you have a timetable for the testing?

**Mr GREEN:** I understand it is imminent, so within a short period of time.

**CHAIR:** Will that be dovetailed with the process onshore? Are you liaising with that or is it a completely separate operation?

**Mr GREEN:** This is a whole of government exercise so if remediation is required on our land, which is only a small area and on the seabed then it will be done as a part of the overall remediation.

**CHAIR:** How far off the high-water mark, for example, on the seabed would you be testing for any contaminants? Is it a very large area? We have been given to understand that there is a potential contaminant offshore of those sites, but also there is the issue of contaminant of petroleum tars from the original carbolic acid site, if I understand it correctly, which is obviously way back in history but nevertheless it is fairly typical of the sort of contaminant that exists in those old industrial areas around the harbour there. Do you have any idea of the area in which you would be taking an interest in there?

**Mr GREEN:** No, I do not. When the testing is done it will show how far we need to go and where we need to go.

**The Hon. LYNDIA VOLTZ:** Obviously if you are looking at contamination of the water in those kinds of industrial bays, lead and a whole range of things are going to be issues where there has been heavy management. Is there an understanding that once you start dredging in those kinds of silt-laden bays that it becomes an issue? I ask the question because I am looking at the Scott report in 1977 and his recommendation at the time was that "the underwater material would be dredged and placed on the foreshore reclamation and/or on the concrete paving at Kelly's Bush to dry out, and then be placed and stored in 44 gallon drums". For example, in Blackwattle or Rozelle bay where there is a huge amount of contamination and the theory was to leave it there because of the type of contamination.

**Mr GREEN:** Yes, I understand with contaminations on seabeds there is an issue of if it is disturbed, you know, there is a layer of silt that ends up over a contamination over time, and the advice we get on occasion is that if it is deep enough it is best not to disturb it.

**The Hon. HELEN WESTWOOD:** On the evidence the committee has received to date there has been a suggestion as part of the remediation process that the land would be disposed of and taken away from the site via the waterway, by a barge. Has Maritime been consulted about that? If so, have any issues been raised about that method of disposal and removal?

**Mr GREEN:** No, I am not aware of any formal consultations at the moment on that particular method.

**The Hon. HELEN WESTWOOD:** Would you expect to be consulted if that were to be proposed?

**Mr GREEN:** Most certainly.

**The Hon. HELEN WESTWOOD:** In terms of the future of the land, what is the purpose of the foreshore land that you own there? What is its use?

**Mr GREEN:** The smaller site is just trees, and on the other site the adjoining owner has a lease on that land. He has a boat ramp, a shed, garden and that sort of thing.

**The Hon. HELEN WESTWOOD:** It is not the sort of foreshore land that could possibly have public access to the foreshore in the future? Has Maritime ever considered that?

**Mr GREEN:** If you have been there I do not think you would be able to get public access to those sites.

**The Hon. HELEN WESTWOOD:** So it does not link up to anything?

**Mr GREEN:** It does not link up. There are cliffs on both ends. I am talking about the book ends here and the only way you would get public access would be through the properties themselves.

**CHAIR:** Were you on the boat on Monday that committee members saw offshore?

**Mr GREEN:** I was, and it was a lovely day.

**CHAIR:** It was an interesting coincidence: I am very impressed by your diligence. Would you explain to the committee what you were researching or observing on that day and where are things up to in terms of your efforts? I presume you were not fishing.

**Mr GREEN:** No, I was not fishing. It is a very simple explanation. I had been past the site in about mid-March, someone told me about it, and when I was invited to attend today I thought I had better go and have a really good look. So the idea was just to go out and look at the site and get a real feel for what was out there. It was only so I had in my mind exactly what the site looked like.

**CHAIR:** Was there anything apparent to you from that particular angle, being on the water, that the committee may have missed onshore because you would have had a broader purview of the area?

**Mr GREEN:** No, I suppose the thing that springs to my mind most is the very alcove nature of the site and the cliff wrapping around and coming right to the water. I suppose that was the thing that impressed me the most and also the steepness of the cliff and the difficulty in getting down onto that area.

**CHAIR:** Is that a restricted area for fishing activity?

**Mr GREEN:** I am not aware of any restriction but I can check.

**CHAIR:** Would your department be looking at that or is that something under DECC in terms of the viability of fishing in that site or the implications of taking fish from that site?

**Mr GREEN:** I am not too sure. I have to take it on notice.

**The Hon. ROBERT BROWN:** I think the committee arranged the visit for low tide low-water mark, from memory.

**The Hon. LYNDA VOLTZ:** Yes, it was low; the oysters were exposed.

**Mr GREEN:** I am not too sure.

**The Hon. ROBERT BROWN:** I think the Hon. Lynda Voltz was the only one who went onto the foreshore.

**The Hon. LYNDA VOLTZ:** The Hon. Rick Colless followed me, but that is just Rick.

**The Hon. ROBERT BROWN:** Was there any exposed seabed visible to you?

**Mr GREEN:** No, I cannot recall seeing any. It was pretty much seawall.

**The Hon. LYNDA VOLTZ:** The Government purchased Kelly's Bush for a similar reason for remediation. Did Maritime ever have ownership of any of that site? It is further around the next bay?

**Mr GREEN:** I would have to take that on notice.

**CHAIR:** We have the Scott report so there is no need to supply that to the committee.

**(The witness withdrew)**

**(The Committee adjourned at 4.05 p.m.)**