Submission
No 8

FORMER URANIUM SMELTER SITE, HUNTER'S HILL

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Position: Member for Castle Hill

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General Purpose Standing Committee No 5
Inquiry into former radium smelter site, Nelson Parade, Hunter's Hill

Submission from Michael Richardson MP
Member for Castle Hill

June 27, 2008

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Introduction

I make this submission as the Member of Parliament who first brought this site back to the public's attention. Nelson Parade last received publicity in the late 1970s, however little has been done to remediate the site since then. I hope that this investigation ensures that this legacy of our industrial past is dealt with properly once and for all.

The site first came to my attention as the result of a Freedom of Information request in December 2007 relating to a hydrocarbon-contaminated site in Nelson Parade. Large sections had been blacked out, however the words 'radiation' and 'radium' escaped the censor.

Since then I have engaged radiation consultants, lodged numerous FOIs and questions on notice, scanned libraries in Sydney and Canberra, and spoken to many stakeholders. The results have variously saddened, perplexed and enraged me. This site is unique in Australia, but the Iemma Government has treated it as though it were an ordinary industrial site that can be cleaned up using standard methods for chemical contaminants.

I thank GPSC No. 5 for their work in investigating this matter, and particularly Ian Cohen, Rick Colless and Robert Brown for supporting the call for an inquiry.

Michael Richardson MP
Member for Castle Hill

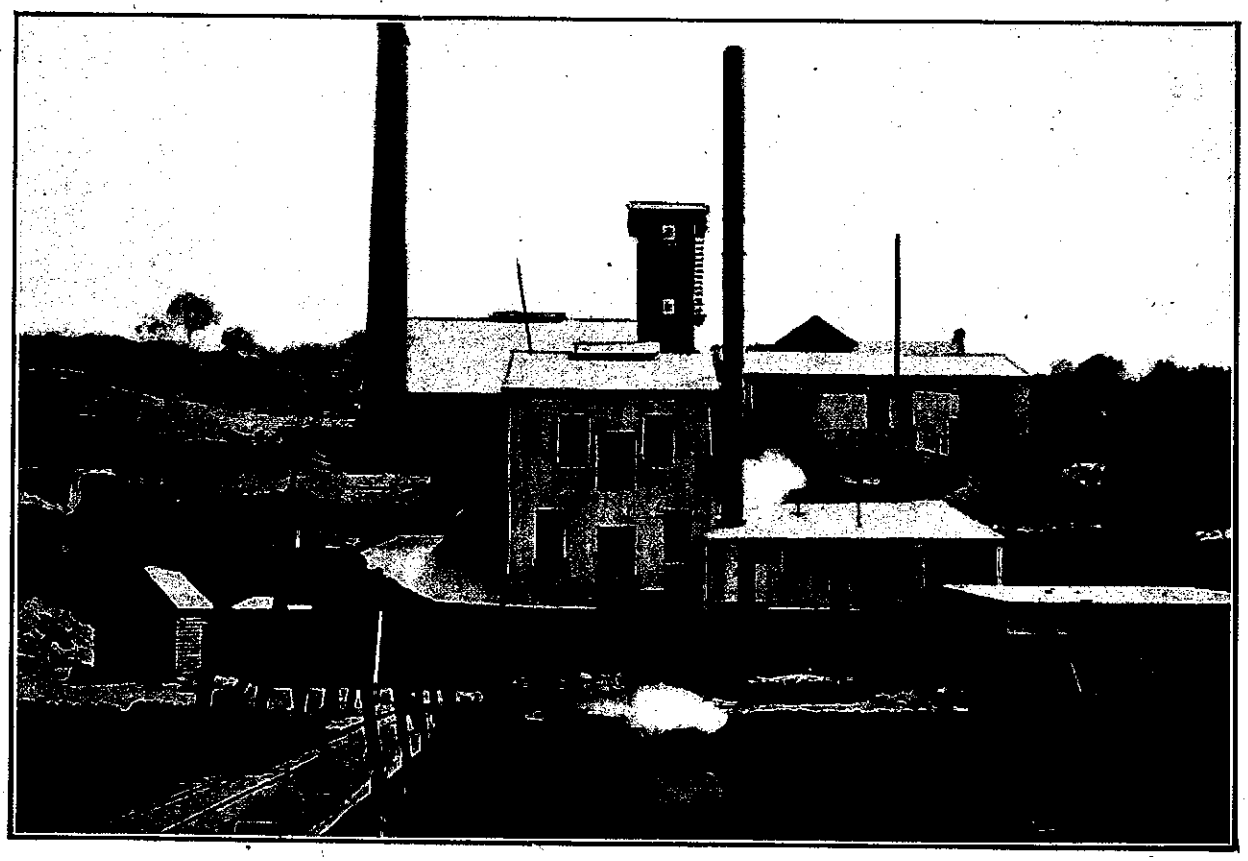

Figure 1: The Radium Hill refinery in Nelson Parade, Hunter's Hill, 1912

Summary

More than 3000 tonnes of radioactive waste sits on two waterfront blocks in Nelson Parade, Hunters Hill. It was the location of a radium smelter between 1908 and 1915, and is now owned by NSW Health. The site carries no warning signs and there are houses close by on land previously occupied by the smelter.

Five deaths have been attributed to this site, with possibly more to come. Three of those deaths occurred after the Government was first made aware of the dangers of the site in 1965.

Attempts have been made to clean up the site previously, most notably in the late 1970s. That attempt failed because the Wran Government could not find anywhere suitable to dump the waste.

The current Government is trying to have Nelson Parade hazardous waste classified as industrial or inert waste. The EPA has downgraded the classification of hydrocarbon waste when the test results do not show the pollutants have been immobilized. No further analysis of soils is proposed during the remediation works.

The remediation plan deals with No 7 and 9 Nelson Parade, and the foreshore of No 11. Remediation will not remove identified radioactive contamination from No. 5, No. 11 & No. 13 Nelson Parade, and Fern Bay.

Senior Government officials have said that the remediation must break even or the clean up won't go ahead.

The planned remediation won't meet NSW radiation guidelines. Even after the so-called remediation, radiation will still be more than double background levels.

I understand there are no landfills in NSW licensed to receive hazardous waste.

The company engaged to remediate Nos. 7 and 9, GHD, told local member Anthony Roberts MP that the waste would go to Castlereagh. The Government subsequently denied it, even though the Castlereagh Waste Disposal Depot had been re-opened for remediation waste on January 1 2008.

The NSW Government has not been forthcoming with documents on this matter, and has also identified inadequacies in its records for this site.

Comments from the Department of Health concerning the remediation planning, timeline and the involvement of the Minister have been ill advised at best, and misleading at worst.

Currently, large amounts of highly radioactive waste continue to be stored behind a pool fence in a residential area without any warning signs.

History of the Site

More than 3000 tonnes of radioactive waste sits on two waterfront blocks in Nelson Parade, Hunters, owned by NSW Health. The site was occupied between 1908 and 1915 by a smelter that extracted radium from ore imported from South Australia. The company that owned the smelter, the Radium Hill Company, went broke during World War One[1] and eventually the land was subdivided and sold off for housing.

In 1965, reports of three deaths in one family in Nelson Parade were investigated[2, 3, 4]. Sites on what is now No. 5 to No. 11 Nelson Parade were tested by the Department of Public Health[5]. Internal Government reports show very high readings on No. 5, 9 and 11. It appears these reports were not made public.

In 1968, undeveloped land at No. 11 was apparently given the all clear by the Government, and Mr. Benjamin Nurse and his wife, Justice Mary Gaudron, constructed a house.

In the late 1970s workers in uranium mines in Canada were found to be contracting lung cancer from radon gas emitted from the decay of radium, and the houses at Nos 7 and 9 were retested for adon. No. 7 was found to have radon levels 16 times higher than the maximum allowable threshold.

There was a concerted move to remediate the Nelson Parade site. Several proposals were considered, including dumping the contaminated waste at sea, and transporting it to a site near Ivanhoe in western NSW[6]. All were abandoned because of environmental concerns.

In June 1982 the Wran Cabinet ordered the two houses on Nos 7 and 9 be pulled down. NSW Health acquired the site, along with the foreshore land behind No 11. Because of health concerns related to the radioactive contamination, the Nurses sold No 11 at a substantial discount to true value to the Government, which then reportedly transferred radioactive material from No 11 to Nos 7 and 9. The waste was then covered with soil and the land fenced and landscaped with native plants[7].

A fuller record of the site's history to that point is provided by Dr Gavin Mudd's paper[8].

In 1989 the Greiner Government sold No. 11 to Mrs Kongats, who had previously lived in No. 7[9]. The Department of Health certified the house as being clear from radioactivity[10]. Mrs Kongats subsequently sold the house to the current owners, the Vassilous, in 2001[11].

I have personally visited Nos 7 and 9 while experts from CETEC tested the site with a radiation meter. They found surface radiation levels more than 30 times higher than background above the cliff on the property and immediately adjacent to No. 11.[12]

In August 2001 Premier Bob Carr said the site should not be sold until it had been remediated. However, in the absence of a radioactive waste dump no action was taken.

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[1] Radium Hill Company, Reports and Balance Sheet to June 1915.
[2] Information from Mrs E Rourke re deaths of residents in Nelson Parade, no date.
[3] Information received from Mr. W. Williams of Como re deaths of residents at Nos 1, 3 and 5 Nelson Parade, Hunter's Hill, no date
[4] Whaite, H.M & Bayliss, R.J, 'Report on radioactive contamination in the grounds of dwellings in Hunter's Hill', no date.
[5] Bayliss, R.J, 'Radioactive contamination in the grounds of dwellings at Hunter's Hill, 26th March 1966, p.1-2.
[6] Taylor, M, '$1m for Hunter's Hill Clearance', Australian Financial Review, 28th January 1980.
[7] Fleischmann, A.W, letter to Dr Stuart Spring, 13th May 1993.
[8] Mudd, G, 'The legacy of early uranium efforts in Australia 1906-1945: from Radium Hill to the atomic bomb and today', Historical Records of Australian Science, 2005, 16, 169-198.
[9] Notice of Sale or Transfer of Land, 18th January 1989.
[10] Smith, P.J, 11 Nelson Parade, Hunter's Hill, Notice of Determination of Development Application, 24th August, 1989
[11] 'Transfer, NSW Real Property Act 1900, Office of State Revenue, 19th November 2001.
[12] CETEC, Assessment of radioactivity levels at 7-9 Nelson Parade, Hunter's Hill, NSW 2154, p. 2.

Uranium, thorium, radium and radon are not the only contaminants on this site. So polluted with hydrocarbons, arsenic and lead is the foreshore land that in May 2005 the EPA ordered NSW Health to remediate it, saying it comprised a 'significant risk of harm'. The remediation order, which deals with Nos 7 and 9 Nelson Parade, and the foreshore of No 11 [13][14], made no mention of radioactive waste[15].

NSW Health saw this as an opportunity to remediate the whole site, but because it had no budget for projects like this decided to have the waste classified as industrial waste and disposed of in an industrial landfill. The Department hopes to recover its costs by selling the land for housing.

Remediation will not remove identified radioactive waste from Nos. 3. 5, 11 and13 Nelson Parade, Fern Bay, and any other properties which may have received contaminated fill from excavations on No. 11. As far back as the 1960s, 'no living persons appear to have any knowledge of where the plant waste was deposited'

Is Hunter's Hill Waste Hazardous?

Extensive testing over several decades suggest the waste from Numbers 7, 9 and 11 Nelson Parade is hazardous, both chemically and radioactively.

Egis Consulting's Remedial Action Plan for Nelson Parade from June 2000 states that 'the relevant statute is the *NSW Radiation Control Act 1990* and the *Radiation Control Regulation 1993*.[16]'

Under the *NSW Radiation Control Act*, radioactive waste is classified as 'hazardous' if it has a specific activity over 100 Becquerels per gram (Bq/g). Egis's 1999 report (commissioned by NSW Health) measured maximum activity of 50 Bq/g on No. 7, and 80 Bq/g on No. 9[17]. Depth sampling of 'hot spots' during Stage 2 in 2000 gave an average activity of 66.8 Bq/g over 19 samples[18].

However, in 1965, Radium-226 activity on No. 11 Nelson Parade was measured at 75,200 picocuries per gram (approximately 2,782 Bq/g)[19]. That is nearly 28 times the 'hazardous' threshold. The material was moved during excavation by Graham Camp, and is presumably now on the foreshore of No. 11.

Sinclair Knight & Partners also conducted tests in 1987. The company identified 37 samples from 25 sites where radiation exceeded the 100 Bq/g limit. One sample had a total activity around 787 Bq/g, almost eight times the hazardous waste limit[20].

There are no records of this material being removed from the site. And far from becoming less radioactive over time,, experts suggest it will become more radioactive over the next 1000 years as thorium decays to radium and radon.

Egis advised that the Radiation Control Regulation allows a 'maximum permissible equivalent body dose = 1 mSv/yr' (milli-sievert per year) for 'members of the public chronically exposed to radiation'. Egis concludes that 'assuming a background of 2.25 mSv/yr, the NSW Control Regulation infers a limit of 3.25 mSv/yr.[21]'

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[13] GHD, Lot 7 & 9 Nelson Parade + adjoining foreshore land, Hunter's Hill, remediation action plan and technical specification, May 2006, p. 6.
[14] Bell, A, 'Investigation of radioactive contamination of residential premises at Hunter's Hill – interim report', Department of Public Health, 11th November 1965.
[15] Environment Protection Authority, Declaration of remediation site, available at http://www.environment.nsw.gov.au/clmApp/docs/html/N21083.htm
[16] Egis Consulting, Remedial Action Plan for Nelson Parade, June 2000, p. 20.
[17] Egis Consulting, Stage one investigation of radioactive contamination, numbers 7 and 9 Nelson Parade, Hunter's Hill for New South Wales Department of Health, November 1999, p. 34.
[18] Egis Consulting, Stage two investigation of radioactive contamination, numbers 7 and 9 Nelson Parade, Hunter's Hill, February 2000, p. ii.
[19] Bayliss, R.J, 'Radioactive contamination in the grounds of dwellings at Hunter's Hill, 26th March 1966, p.1.
[20] Sinclair Knight & Partners, 'Radium waste clean up, Nelson Parade, Hunter's Hill, September 1987, table A-4 to A-9.
[21] Egis Consulting, Remedial action plan, lots 7 & 9 Nelson Parade, Hunter's Hill, NSW, June 2000, p. 21.

This background figure is consistent with CETEC's readings, although ARPANSA maps suggest a maximum for the area of just 1.5 mSv/yr[22]. In any case, the Government was clearly told that the Regulation requires final radiation levels of 3.25 mSv/yr.

In 2002 the Department of Health commissioned GHD to provide a 'Desktop Review of Appropriate Radiation Clean-Up Criteria'. GHD advised that "there is no criteria (sic) for the clean-up of radioactive soil contained in any of the guidelines 'made or approved' by the NSW EPA under the Contaminated Land Management Act, 1997[23]'. GHD said that 'the internationally recognised dose limit of 1 mSv/yr criteria is inappropriate to be used as the clean-up criteria, as it is lower than background levels at the site'[24]. However, the 'internationally recognised dose limit' is not an absolute value of 1 mSv/yr, but 1 mSv/yr *above background levels*[25]. That elementary mistake is the foundation of the entire clean-up.

GHD searched for guidelines in Germany, the U.K and the U.S.A, and finally adopted National Health & Medical Research Council recommendations from 1984 that allows up to 0.7 μGy/yr (micro-gray per year), which 'corresponds to an effective gamma dose limit of 5-6 mSv/yr'.

That is double background levels, and almost twice as much as the NSW Regulation allows. The NHMRC guidelines were developed for mine sites, yet the NSW EPA has approved them for a residential street.

An email from April 2003 included in Appendix B of GHD's 2006 Remediation Action Plan states "a post remediation level below 0.7 μGy/hr would be acceptable to the EPA, provided the remaining soils have a specific activity of less than 100 Bq/g (Becquerel per gram)."

GHD also admitted that 'the current NSW EPA criteria do not account for exposure to alpha and beta radiation'.

The Government appears to have ignored its own proper regulation, and adopted a much softer one that doesn't even account for all the radiation that is on the site.

Five People Dead Of Radiation Related Cancers

At least five former residents of Nelson Parade, Hunters Hill have died of leukaemia and stomach cancer, a primary cause of which is excessive doses of radiation. They are:

- Andrew McClure - lived at No. 7 Nelson Parade, died of leukemia in 1952.
- Iris Lucas - lived at No. 7 Nelson Parade, died of stomach cancer in 1961.
- Iris McGrath – lived at No. 17 Nelson Parade, died of stomach cancer in 1975.
- Fabian McGrath - lived at No. 17 Nelson Parade, died of leukemia in 1976.
- Gerald Conlon – lived at No. 9 Nelson Parade, died of lymphatic leukemia in 1987.

Two of the deaths are detailed in documents collected in the 1970s by former Federal Labor MP Tom Uren and held by the National Library in Canberra[26, 27]. Another person mentioned in the Uren papers as suffering from lymphatic leukemia has since died, while the tragic deaths of Mr and Mrs McGrath were revealed in a phone call from a former resident of the street, Katie McGrath, who was orphaned in 1976 at the age of five.

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[22] ARPANSA, 'What's background radiation? available at http://www.arpansa.gov.au/pubs/baseline/bg_rad.pdf, p. 2.
[23] GHD,'Desktop Review of Appropriate Radiation Clean-Up Criteria', November 2002, p.2.
[24] ibid, p. 12.
[25] International Commission on Radiological Protection, Limits on exposure, available at http://www.arpansa.gov.au/RadiationProtection/Factsheets/is_rad.cfm
[26] Information from Mrs E Rourke re deaths of residents in Nelson Parade, no date.
[27] Information received from Mr. W. Williams of Como re deaths of residents at Nos 1, 3 and 5 Nelson Parade, Hunter's Hill, no date.

A major cause of the deaths appears to have been eating vegetables grown on Nos. 7 and 9, before and after the Radiation Branch of the Department of Health conducted tests on the blocks in the mid-1960s[28].

Those tests were woefully inadequate. They missed massive amounts of radium contamination at No. 7 because it was underneath the house. In fact, the Radiation Branch decided that 'the gross inconvenience to residents of soil removal and filling outweighed the risks of a radiation hazard.'

The Branch was not aware of the danger posed by radon gas, which was subsequently detected at levels 16 times the recommended maximum limit inside No 7.

So slapdash was the testing a memo to Tom Uren dated November 28 1977 warned: 'It is urgent that the Premier immediately call up all Radiation Branch original files on the Nelson Parade contamination before the ineptitude of the Branch is public knowledge.[29]'

The Government's Clean-Up Plan

On 20 November 2007. The Government's Health Administration Corporation lodged a Part 3A application with Planning Minister Frank Sartor to remediate Nos. 7 & 9 Nelson Parade [30]. The accompanying preliminary environmental assessment rules out capping and containing the radioactive waste on-site, as the lead or concrete covering 'would need to be guaranteed for an unrealistically long period.[31]' Besides the 'build up of radon gas', 'gaining the appropriate regulatory approvals for a containment cell to house radioactive material in a residential setting would be difficult.'

Consultants GHD anticipate 1250 m^3 of contaminated soil will require excavation and off-site disposal. The plan is to dig the soil up, transport it to Nelson Parade by conveyor belt before it was loaded and trucked to 'a suitably licensed landfill, under the appropriate waste classification'.

On May 15 this year Health Minister Reba Meagher said: "subject to planning approval by the Department of Planning, contaminated waste soil and materials removed from the site are proposed to be safely disposed of to a landfill licensed to accept industrial waste" [32].

SITA Environmental at Kemp's Creek operates the only licensed industrial waste facility in Sydney. It charges $160 a tonne for industrial waste, but can't take hazardous waste. The 2006 Remedial Action Plan warned the Government that 'there are currently no landfills in NSW licensed to accept hazardous waste'.[33]"

Lane Cove MP Anthony Roberts was told by GHD in mid January that the waste would be taken to an industrial tip near Castlereagh, in Sydney's west.

Environment Minister Verity Firth said in reply to a Question on Notice on May 16 that she was "not aware of the details of any conversation between the contractor and the Member for Lane Cove". The Minister also said "no material taken from the Hunters Hill site as part of the remediation will be taken to Castlereagh as this facility is no longer an operational landfill.[34]"

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[28] Bell, A, 'Investigation of radioactive contamination of residential premises at Hunter's Hill – interim report', Department of Public Health, 11th November 1965.
[29] Letter to Mr. Tom Uren, November 28th, 1977.
[30] NSW Department of Planning, Major project application, available at http://www.planning.nsw.gov.au/asp/pdf/08_0008_huntershill_remediation_application.pdf
[31] GHD, Remediation of No. 7 – 9 Nelson Parade, Hunter's Hill, Preliminary environmental assessment, available at http://www.planning.nsw.gov.au/asp/pdf/08_0008_huntershill_remediation_prelim_asst.pdf
[32] Question on notice 2824 – Radioactive contamination – Nelson Parade, Hunter's Hill, May 15, 2008
[33] GHD, Lot 7 & 9 Nelson Parade + adjoining foreshore land, Hunter's Hill, remediation action plan and technical specification, May 2006, p. 23.
[34] Question on notice 2823 – Radioactive contamination – Nelson Parade, Hunter's Hill, May 16, 2008.

However, Planning Minister Frank Sartor confirmed on April 9 that Castlereagh Liquid Waste Disposal Depot could now receive remediation waste under recent changes to the Infrastructure State Environmental Planning Policy (SEPP No. 11)[35]. The SEPP was amended to permit additional uses of the Castlereagh site, effective January 1, four days before Christmas last year [36].

On January 29 the Environment Department spokesman said 'he is not sure where the materials will be dumped but NSW Health has assured him they will be taken to an industrial waste depot'[37]. So the Department costed the remediation in November, but said in January it was unsure where to dispose of it. How did it manage to cost the job without knowing the waste classification and the site specific disposal charges? How has the Health Department pre-empted the waste classification? Why won't the Government give the final destination for the waste?

The Director-General's requirements for environmental assessment were issued on February 11 2008. They require the Department to report on the 'destination of the contaminated material and capability of the destination to accept and manage the contaminated soil'. The report is not due until February 2010[38].

However, reports obtained under Freedom of Information show the Government actually considered dumping the radioactive waste into a normal solid waste landfill.

The Egis Stage 1 report from 1999 states that 'the radioactively contaminated soil on Nos 7 and 9 would not even be classified as an industrial waste. At least in principle, this means that the soils could be disposed of in a regular solid waste landfill. [39]' The Egis Consulting Stage 2 report from February 2000 again promoted the possibility of 'disposal of the contaminated soil from the site to a Solid Waste Landfill Class 2 [40]'.

Castlereagh Waste Disposal Depot

The Castlereagh Waste Disposal Depot is a 357 ha site located on The Northern Road approximately 10 km south east of Windsor.

The site was established as a 40-hectare site in 1974 as a temporary repository for contaminated industrial liquid and sludge from the Sydney region, pending development of more permanent facilities. The area and operating time limits were extended every three years until 1987 when then Environment Minister Bob Carr made it permanent. He allowed 200,000 tonnes of unknown and potentially dangerous toxic waste to be dumped on the site annually.

The Depot remained in use until 1998, although waste volumes decreased by four-fifths after the Lidcombe Aqueous Waste Treatment Plant was opened in 1988.

Two environmental studies conducted on or around the Depot produced conclusive findings; the Castlereagh Waste Disposal Depot Stage II Environmental Audit (1994), initiated by Liberal Environment Minister Chris Hartcher, and the Human Health Study (1995), proposed by Paul Gibson.

The Human Health Study found a significantly higher incidence of brain cancer in men near the Depot compared to the rest of the Penrith Local Government Area. The Western Area Health Service continues to monitor the incidence of brain cancer, as well as breast cancer, uterine cancer and cleft lip and palate in children.

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[35] Question on notice 2296 – Castlereagh liquid waste disposal depot, April 9, 2008.
[36] State Environmental Planning Policy No. 11 – Infrastructure, Section 122 – Additional permitted uses – Castlereagh Liquid Waste Disposal Depot.
[37] 'NSW Govt under pressure to explain nuke waste dump', ABC News, 29th January 2008, available at http://www.abc.net.au/news/stories/2008/01/29/2148455.htm
[38] Department of Planning, Director General's Requirements, Hunter's Hill remediation project, available at http://www.planning.nsw.gov.au/asp/pdf/08_0008_huntershill_remediation_dgrs.pdf
[39] Egis Consulting, Stage one investigation of radioactive contamination, numbers 7 and 9 Nelson Parade, Hunter's Hill for New South Wales Department of Health, November 1999, p. 35.
[40] Egis Consulting, Stage two investigation of radioactive contamination, numbers 7 and 9 Nelson Parade, Hunter's Hill, February 2000, p. ii.

The Audit found that the potential migration of pollutants in groundwater and surface water was negligible. It confirmed that the contaminants have leached from waste cells into groundwater, but the contamination had not moved off site. Regular quarterly and half yearly groundwater monitoring during 1996-97 showed high levels of toluene in off-site monitoring bores.

After continuous community and Council pressure, Environment Minister Pam Allan closed the Depot on December 31, 1997[41].

The facility was formerly governed by SEPP 3, gazetted on June 19,1981. The SEPP was repealed on December 21 last year, and was replaced with an Infrastructure SEPP, which commenced on January 1 this year. Section 122 of the SEPP permits additional uses of the Castlereagh Liquid Waste Disposal Depot.

On March 6, 2008, I asked the Minister for Planning the following questions[42]:

1. What type of inert waste does clause 122 of the new Infrastructure State Environmental Planning Policy allow to be disposed of at Castlereagh Liquid Waste Disposal Depot?
2. Does the SEPP allow waste from a remediation site to be disposed of at Castlereagh?

His answer was

1. Waste that satisfies the definition of inert waste in the Protection of the Environment Operations Act 1997 may be disposed of at the Castlereagh Liquid Waste Disposal Depot site with development consent.
2. Waste from a remediation site that is inert waste may be disposed of at the Castlereagh Liquid Waste Disposal Depot site with development consent.

Again, the Government's ability to dispose of waste from Nelson Parade hinges on the classification of that waste.

Government Open To Future Liabilities

The NSW Government knows its records about radioactive waste from Nelson Parade, Hunter's Hill, are flawed and leave it open to possible legal action, according to documents obtained under Freedom of Information. Members of the public were told in 2005 that radioactive waste had been taken from the site in 1992. But the DECC knew in 1999 that there was no evidence of transfer, and that the waste had probably been dumped over a cliff on the site.

A 2005 letter from the DEC to Dr Gavin Mudd says: 'In September 1992 a house on one of the two remaining blocks was demolished and some soil was removed and sealed in three 205 Litre drums. This small amount of contaminated soil is under the control of DEC'[43].

However, a 1999 Egis Consulting report commissioned by NSW Health found that highly radioactive radium found under the floor of No 7 Nelson Parade appeared to have been dumped over a cliff 11 metres away [44], even though the material was supposed to have been taken to Radiation Health Services Branch at Lidcombe.

Egis could find 'no actual documentation at all specifying where contaminated soil had been uplifted from, how much, and where it was re-located to'[45]. It concluded that 'the various references in State archives to the

[41] Penrith City Council, State of the Environment Report 1996-7, available at http://203.221.255.16/index.asp?id=3016.
[42] Question on notice 2296 – Castlereagh liquid waste disposal depot, April 9, 2008.
[43] Plues, L, letter to Dr. Gavin Mudd, March 10th, 2005.
[44] Egis Consulting, Stage one investigation of radioactive contamination, numbers 7 and 9 Nelson Parade, Hunter's Hill for New South Wales Department of Health, November 1999, p. 32.
[45] ibid, p. 16.

uplifting of the soil from beneath No. 7, their storage in 200 L drums and relocation to the Radiation Control Branch may be spurious'[46].

Did this highly radioactive material go to Lidcombe or is it still at Nos 7 and 9?

When I tried to FOI the Lidcombe records, the Government refused to release them, citing terrorism concerns[47]. This in itself suggests the material is far more radioactive than the Government has admitted.

The 1999 Egis report also found a further three new spots of contamination on the site not previously identified in 1987 [48]. They were assumed to be radioactive soil removed from No. 5 Nelson Parade in February 1993 [49] but, again, there were no records to confirm it [50]. Egis warned: 'there is obviously a need to investigate these locations to avoid any future potential liabilities accruing to DOH which may be put further at risk by this apparent lack of documentation' [51].

Remediation Plan Contradicts Health Department Claims

When the story of the uranium smelter site broke in late January, director of environmental health for NSW Health, Dr Wayne Smith, said of the remediation: "The planning is only beginning, we don't know how it's going to be done.[52]"

It has since emerged that the Health Administration Corporation had lodged a Part 3A application with Planning Minister Frank Sartor to remediate the blocks on 20 November 2007, along with a preliminary environmental assessment.

That application shows GHD anticipates 1250 m^3 of contaminated soil will require excavation and off-site disposal. The plan was to dig the soil up, transport it to Nelson Parade by conveyor belt and truck it to 'a suitably licensed landfill, under the appropriate waste classification'. The Government still won't say where that landfill is.

According to Dr Smith, the Government was "planning on removing the contaminated soil, *either by sealing it where it is* or digging it up and transporting it somewhere else, where it is safe to dispose of."

Yet GHD's preliminary environmental assessment rules out capping and containing the radioactive waste on-site, as the lead or concrete covering 'would need to be guaranteed for an unrealistically long period.' Besides the 'build up of radon gas', the company says 'gaining the appropriate regulatory approvals for a containment cell to house radioactive material in a residential setting would be difficult.' Documents from the 1970s suggest this material will become progressively more radioactive for the next 1000 years. So why did Dr Smith propose sealing it when his own project application had already ruled it out?

The NSW Department of Environment also admitted in January that the Government did not know what radioactive materials were on the site and further assessment was needed.

Dr Smith was also reported as saying that no time line existed for remediation of the site and the sale of the land [53].

Yet the Health Department's notice for a residents' meeting it held in Gladesville on December 11, 2007, states 'the remediation works are due to commence in early 2008'[54].

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[46] Egis Consulting, Stage one investigation of radioactive contamination, numbers 7 and 9 Nelson Parade, Hunter's Hill for New South Wales Department of Health, November 1999, p. 32.
[47] Freedom of Information (FOI) application FIN 1115, February 7th, 2008.
[48] Egis Consulting, Stage one investigation of radioactive contamination, numbers 7 and 9 Nelson Parade, Hunter's Hill for New South Wales Department of Health, November 1999, p. 32.
[49] ibid, p. 15.
[50] ibid, p. 16.
[51] ibid, p. 33.
[52] Cubby, B, 'Harbourside radioactive dump 'no risk', Sydney Morning Herald, January 29, 2008, available at http://www.smh.com.au/news/environment/harbourside-radioactive-dump-no-risk/2008/01/29/1201369120829.html
[53] Cubby, B, 'Rules broken on waste dump site', Sydney Morning Herald, January 30, 2008, available at http://www.smh.com.au/news/environment/rules-broken-on-waste-dump-site/2008/01/29/1201369135239.html

Dr Smith was also reported as saying that Health Minister Reba Meagher was unlikely to have been involved in approving plans to remediate the site in Nelsons Parade. Yet the site was compulsorily acquired by the Health Administration Corporation in August 2007 [55,56] – and the Corporation can only acquire land with the Minister's approval [57, 58].

A 1977 report by radiation expert Berne Scott clearly states that 'the only remedial action which should be considered is the complete removal of all soil from blocks no 7 and 9[59]', as it 'becomes more serious as time passes'[60].

The stumbling block to that (desirable) outcome for the last 30 years has been: where to take the contaminated material. The Iemma Government seems to have found an answer: classify it as industrial waste and dispose of it in a licensed industrial landfill.

NSW Health seemes determined to make a profit from the operation. NSW Health has put the estimated cost at just $2.1 million. If the waste were classified as hazardous, the cost would be much higher, making it almost impossible for the Department to recoup its costs.

Senior Property Officer, Jeff Pollard, said in May 2003 'they must break even or hopefully make a small profit before they can give the go ahead'[61].

In December 2007 the Department held a public meeting for local residents to discuss its remediation plans[62]. They did not include the ultimate destination of the waste, but when Member for Lane Cove Anthony Roberts rang GHD, the company engaged to carry out the clean up, he was told it would be going to Castlereagh. Environment Minister Verity Firth has since denied this[63] but has refused to reveal the ultimate destination of the material.

The preliminary environmental assessment acknowledges that the Radium Hill refinery site covered Nos. 5 to 11, not just the Government owned blocks at Nos. 7 and 9[64].

However, the proposed remediation covers only Nos. 7 and 9 and the foreshore of No. 11 Nelson Parade. There is contamination on Nos. 5, 11 and 13 and possibly further afield which must be dealt with for the sake of current and future residents of Hunters Hill.

Sydney Harbour and the foreshore land

Documents from the National Library files of Tom Uren reveal much of the history of the site. Fern Bay adjacent to site was contaminated by liquid wastes and tailings. Government documents estimate there is around 500 tonnes of radioactive material on the Harbour floor.

A Public Health Department report dated 21st December 1965 says 'an area of contamination was detected, outlining the original wharf, and measuring about fifty feet by twenty feet. Here counts up to 12 times background and averaging about four times background were found.' The report notes 'it is of course possible that this count represents a much higher activity than this, due to coverage of the surface by mud and silt'[65].

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[54] NSW Health, Proposed remediation of NSW Health land, Nelson Parade, Hunter's Hill,
[55] Health Administration Act 1982, New South Wales Government Gazette No. 99, August 10, 2007, p. 5668
[56] Land and Property Information NSW – Title Search, January 9th, 2008.
[57] Health Administration Act 1982, No. 135, Section 10(1).
[58] Land Acquisition (Just Terms Compensation) Act 1991, NO. 22, section 19(1-3).
[59] Scott, B, 'Investigation of radioactive contamination at Nelson Parade, Woolwich, April 1977, p. 26.
[60] ibid, p. 5.
[61] Field, B, Minutes of Meeting, May 22nd, 2003.
[62] NSW Health, Proposed remediation of NSW Health land, Nelson Parade, Hunter's Hill.
[63] Question on notice 2823 – Radioactive contamination – Nelson Parade, Hunter's Hill, May 16, 2008.
[64] GHD, Remediation of 7-9 Nelson Parade, Hunter's Hill, preliminary environmental assessment, November 2007, p. 1.
[65] 'Interim report on contamination of residential premises at Hunter's Hill, Department of Public Health, 21st December 1965.

A Health Commission Report from 15 February 1977 says 'it is known that some radioactive material is present in a small area of Fern Bay adjacent to the properties. The extent and level of contamination will be investigated and appropriate action taken in due course'. A letter from the Department of Public Works to the Health Department on 15 March 1977 says 'offshore, the silt layer is required to be dredged to an as yet unspecified depth'.

The Maritime Services Board was informed on 6 June 1977 that 'a preliminary survey of the foreshore of the Parramatta River adjoining properties 3-13 Nelson Parade, Woolwich... has shown that this land is contaminated by radioactive material.' An extensive survey was recommended of 'a nearby area of the river bed which is also known to contain more radioactive residue'. 'Core sampling of the submerged radioactive silt' was to commence in the near future. Whether the testing took place, and the result of that testing, are unknown.

A NSW Health Commission report dated 24 January 1977 estimated that there are seven tonnes of concentrated uranium oxide and 1.6 grams of radium bromide still on the Nelson Parade site.

On September 19, 1977, the Department of Public Works was asked to cost the 'excavation of approximately 400 cubic metres of soil from the reclaimed area at waterfront'. It was to be stored in steel drums at Kelly's Bush until a final disposal site could be found. The waste was never removed, as no suitable site was ever found.

The following day the Health Commission told the Maritime Services Board that 'all the reclaimed foreshore land is contaminated, and it is highly probable that all of the contaminated soil will have to be removed to a suitable disposal area'. It also said that around four cubic metres of contaminated soil from Lot 3 had been placed in plastic bags on the foreshore land of No. 7.

In 1977 the owners of No. 11 Nelson Parade, Mr and Mrs Nurse, were advised that the whole of the reclaimed foreshore land adjacent to their property 'is contaminated throughout to a depth of at least two thirds of a metre.'

What Needs to be Done?

The Iemma Government must move quickly to secure the radioactive waste at Hunters Hill, following revelations that the Government does not know what radioactive material is on the site. No one knows how radioactive the material is, or who might get their hands on it, or whether children might not ingest some of radioactive soil with potentially fatal consequences.

In 2004, the Government warned that intermediate level waste could be used in 'dirty bombs', and ordered the Department of Environment and Conservation to liaise with the Australian Nuclear Science and Technology Organization to 'properly secure' such waste [66]. After four years the department still hasn't done so – not just in Hunters Hill but, I believe, in many other locations throughout the State.

Radioactive waste at Lucas Heights is kept behind two security fences, with scanning video cameras. At Hunters Hill it sits behind a pool fence and a $20 padlock.

The Government also ordered the Department of Environment and Conservation to complete an inventory of non-ANSTO radioactive waste storage sites as a matter of urgency, and identify which facilities need upgrading[67].

I attempted to obtain this list under Freedom Of Information but the Government wouldn't release it as it said it could 'facilitate the commission of a terrorist act'[68].

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[66] NSW Government response to the Inquiry into the transportation and storage of nuclear waste, tabled November 10th, 2004, p. 5.
[67] ibid, p. 2.
[68] Freedom of Information (FOI) application FIN 1115, February 7th, 2008.

For a whole range of reasons this waste cannot stay in Hunters Hill. It has been suggested that it could be transferred to ANSTO at Lucas Heights before being transported to a permanent repository.

However, Lucas Heights could only be used as a temporary storage site for Nelson Parade radioactive waste if Commonwealth law were changed. At the moment Commonwealth law specifically precludes Lucas Heights or indeed any other Commonwealth facility accepting radioactive waste from the States.

Issues for consideration

I would ask GPSC No 5 to note and inquire into the following concerns.

- Reports of five deaths attributed to this site, with possibly more to come.
- Attempts to have Nelson Parade hazardous waste classified as industrial or inert waste.
- The EPA's downgrading of the classification of hydrocarbon waste when the test results do not show the pollutants have been immobilized.
- The fact that no further analysis of soils is proposed during the remediation works.
- The failure to remove identified radioactive contamination from Nos 5, 11 and13 Nelson Parade, and Fern Bay.
- Comments from senior Government officials that the remediation must break even or the clean up won't go ahead.
- The fact that the planned remediation won't meet NSW radiation guidelines - even after the clean-up, radiation will still be more than double background levels.
- GHD's comments that the waste would go to Castlereagh, and the subsequent Government denial.
- The re-opening of the Castlereagh Waste Disposal Depot to receive remediation waste.
- The existence of 295 non-ANSTO radioactive substances storage sites in NSW, many of which need upgrading, and the Government's refusal to provide documents on this issue.
- The inadequacies in the NSW Government's records for the Hunter's Hill site.
- Comments from the Department of Health concerning the remediation planning, timeline and involvement of the Minister.
- Woefully inadequate security at the site.