LEGISLATIVE COUNCIL

STANDING COMMITTEE ON
FINANCE AND PUBLIC ADMINISTRATION

8th Report to the Legislative Council

INQUIRY INTO DEPARTMENTAL AND AGENCY
PERFORMANCE AND OPERATIONS

REPORT ON DEPARTMENT OF HEALTH’S JANUARY 2009
HEATWAVE IN VICTORIA: AN ASSESSMENT OF HEALTH IMPACTS

MAY 2010
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2009 HEATWAVE IN VICTORIA: AN ASSESSMENT
OF HEALTH IMPACTS

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STANDING COMMITTEE ON FINANCE AND PUBLIC ADMINISTRATION

Committee Members

Mr Gordon Rich-Phillips – Chairman
Member for South Eastern Metropolitan Region

Mr Matthew Viney – Deputy Chairman
Member for Eastern Victoria Region

Mr Greg Barber
Member for Northern Metropolitan Region

Ms Candy Broad (until 13 April 2010)
Member for Northern Victoria Region

Mr Peter Hall
Member for Eastern Victoria Region

Mr Matthew Guy
Member for Northern Metropolitan Region

Mr Peter Kavanagh
Member for Western Victoria Region

Mr Brian Tee (from 13 April 2010)
Member for Eastern Metropolitan Region

Committee Staff

Mr Richard Willis – Secretary to the Committee

Ms Susan Brent – Research Officer

Mr Anthony Walsh – Research Officer

Mr Sean Marshall – Research Assistant

Address all correspondence to –

Council Committee Office
Department of the Legislative Council
Parliament of Victoria
Spring Street
EAST MELBOURNE VIC 3002

Telephone: (03) 9651 8696
Facsimile: (03) 9651 6799
ESTABLISHMENT OF THE STANDING COMMITTEE

On 21 November 2007, the Legislative Council resolved to appoint a Standing Committee on Finance and Public Administration with a Membership of seven Members. The Council’s resolution came into operation on 1 April 2008 and the Committee’s inaugural meeting was convened on 7 April 2008.

In accordance with the establishing resolution, the following Members were appointed to the Committee:

- Mr Greg Barber - Australian Greens,
- Ms Candy Broad - Australian Labor Party,
- Mr Peter Hall – Nationals,
- Mr Matthew Guy - Liberal Party,
- Mr Peter Kavanagh - Democratic Labor Party,
- Mr Gordon Rich-Phillips - Liberal Party, and
- Mr Matthew Viney - Australian Labor Party.

At its inaugural meeting the Committee elected Mr Rich-Phillips as Chairman, and Mr Viney as Deputy Chairman.

The establishing resolution provides the Committee with a wide range of powers. Some key features of the Standing Committee include:

- The Standing Committee exists until the Parliament is either prorogued or dissolved.
- Members of the Committee may be substituted by another Member from the same political party.
- The Committee has the power to inquire into any matter or thing relevant to is functions, which is either referred to it by resolution of the Legislative Council, or determined by the Committee.
- The power to appoint sub-committees to inquire into matters.
REPORT

1. Inquiry Background

1. On 28 October 2008, the Committee resolved to inquire into and report on Victorian departmental and agency performance and operations for the previous financial year. The Committee subsequently agreed to modify its terms of reference to the extent that any investigations would not be limited to a particular financial year.

2. On 10 November 2009, the Committee resolved to invite the Department of Health to give evidence at a public hearing with respect to the Department’s January 2009 Heatwave in Victoria: an Assessment of Health Impacts report.

3. In January 2009, Victoria experienced extreme heatwave conditions with temperatures generally 12–15°C above average, whilst Melbourne endured three consecutive days of temperatures above 43°C from 28 to 30 January. In response to the health impacts of such extreme weather conditions, the Department of Health produced a report outlining the significant impact on mortality, morbidity and health service utilisation, with the greater burden of illness and death falling on the elderly.¹

4. An overview of the Committee’s public hearing with the Department, together with follow-up matters, is provided in the following pages.

2. Public Hearing

5. On 2 December 2009, the Committee received evidence from the following Department of Health representatives:

2.1 Key matters raised in hearing

6. The following issues were discussed during the public hearing with the Department of Health:

- The extent of heatwave planning for preventing morbidity and mortality prior to the January 2009 heatwave, including interstate comparisons.
- How the Department of Health responded to the January 2009 heatwave.
- Planning and preparation for future summers, including enhancing public awareness and support for vulnerable members of the community.
- The Department of Health’s heatwave communication strategy with various agencies such as Ambulance Victoria, local government, health centres and public housing.
- Outline of the Wodonga Heatwave Strategy 2008 as an excellent model for local government heatwave planning.
- The extent to which high temperatures will give rise to a rapid increase in mortality and what weather conditions will trigger a heatwave strategy response by the Department.
- Issues relating to public housing accommodation for the elderly and other vulnerable people.

2.2 Documents tabled at hearing

7. The Department provided an opening slide presentation at the public hearing. A copy of the slide presentation is provided in Appendix 1.

2.3 Questions taken on notice

8. The following questions were taken on notice by the Department of Health at the public hearing (page references refer to the transcript in Appendix 2):
• Provide a copy of the Wodonga City Council’s outreach program in relation to heatwave response. (p.8)

• Provide a copy of the Government’s Victorian Heatwave Strategy plan to be released in December 2009. (p.9)

• Details of any data on the possible responses and effects of the high temperatures experienced during November 2009. (p.10)

• Details of general emergency planning in health infrastructure. (p.13)

• Liaise with the Office of Housing and advise the Committee with respect to the monitoring of vulnerable residents in public housing high-rise buildings during heatwaves. (p.12)

• With respect to the extended Housing and Community Care (HACC) program, how many additional HACC nursing hours are required to attend to clients during a heatwave and how many people are registered as vulnerable under the HACC program. (p.12)

9. A copy of the Department of Health’s response to questions taken on notice is provided in Appendix 3. The Department referred the matter of HACC nursing hours to the Department of Human Services, whose response is provided in Appendix 4.

2.4 Other Matters

10. During the hearing, Mr Kavanagh raised a question relating to the fluoridisation of water. The matter was subsequently raised in correspondence to the Committee by the Vice President Barwon Freedom from Fluoridation Inc. The Committee did not take this matter further as it was unrelated to the Committee’s investigations into the Department of Health’s heatwave strategy. A copy of this correspondence is attached in Appendix 5.

Committee Room
5 May 2010
Heatwave and Human Health

Professor C W Brook
Executive Director, Wellbeing Integrated Care and Ageing Division

Dr John Carnie
Director, Health Protection Branch & Chief Health Officer

Presentation to Standing Committee on Finance and Public Administration
December 2, 2009

Heatwave conditions across Europe in August 2003

Excess Mortality:
France 14,800
Italy 10,000
Spain & Portugal 5,000

Greatest impact felt in Paris with a 130% increase in expected mortality
Urban Heat Island Effect

Risk Factors – Heatwave vulnerability

- Age >65 years, infants
- Pre-existing illness
- Unfit
- Overweight
- Some drugs e.g. anti-psychotics, diuretics
- Living alone
- Urban environment
- Type of housing
- Availability of air-conditioning
- Working or exercising outdoors
Victorian Heatwave Strategy

Sustainability Action Statement released in 2006 which committed to:

- Development of a Victorian Heatwave Plan involving communities and local government
- Build the capacity of communities and individuals to self-manage their response to heatwaves;
- Develop a system to provide an appropriate level of coordinated support from health, community and emergency services;
- Identify and carry out required research to support these objectives in the longer term; and
- Host a national conference on climate change health

Victoria January 2009

4 day period from the 27/1 to the 30/1 with 3 days of temperatures in extreme range.

Followed by a further extreme spike on 7/2/09 with subsequent catastrophic impacts associated with Black Saturday.
STANDING COMMITTEE ON FINANCE AND PUBLIC ADMINISTRATION
Report on Department Of Health’s January 2009 Heatwave In Victoria: An Assessment Of Health Impacts

Lead up activity

- Significant media for the Chief Health Officer in preparing the community in lead up
- Agreed health messages developed with Ambulance Victoria
- Nurse-on-call scripts revised
- Departmental Emergency Coordination Centre operating
- Agreement with Bureau of Meteorology to post Victorian heatwave alert on bureau web site - visited 38,517 times
- Engagement with Local Government’s with pilot Heatwave plans

Other activity undertaken

- Health, community and emergency service actions and responses to heatwave alert
- Identification of vulnerable individuals and their carers
- A communication strategy to initiate alert, response and recovery phases of the plan
- Community awareness and education component
- Post event rapid health impact assessment reviewing data from a range of sources - Chief Health Officer report
CHO Report - selected findings

- A finding of 374 excess deaths over those occurring in the same period over the previous five years. A 62% increase in total all-cause mortality with greatest number of deaths in those 75 years or older.
- Emergency departments recorded a 12% overall increase in presentations, a 37% increase in those 75 years and older and an 8% increase in direct heat-related presentations. There was a 3-fold increase in patients deceased on arrival, with 69% of those being 75 years and older.
- The Ambulance Victoria caseload showed a 25% increase in total emergency cases, with a 46% increase over the three hottest days. A 34-fold increase in direct heat-related cases was also noted, with the majority (61%) being in the 75 years and older age group. There was an almost 3-fold increase in cardiac arrest cases.
- The MMDS recorded a 4-fold increase in attendance to direct heat-related conditions, a 65% increase for those 75 and older, and a 2-fold increase in calls to a deceased person.

Mortality

Total all cause mortality is 374 excess deaths (above expected)
Subsequent Activity

Further Progress of the Victorian Heatwave Strategy including:

- Funding to a total of $1.99 Million for development of Heatwave Plans across Local Government
- Further engagement with Bureau of Meteorology, emergency services and health and community services
- Establish trigger thresholds for heat events and activation of heatwave plans
- Development of a surveillance system
- Development of a State wide heatwave plan that brings together relevant resources, action plans and initiatives to minimise health impacts in the event of a heatwave in the 2009-2010 summer season
APPENDIX 2 – TRANSCRIPT OF EVIDENCE
STANDING COMMITTEE ON FINANCE AND PUBLIC ADMINISTRATION

Inquiry into departmental and agency performance and operations

Melbourne — 2 December 2009

Members

Mr G. Barber
Ms C. Broad
Mr M. Guy
Mr P. Hall

Mr P. Kavanagh
Mr G. Rich-Phillips
Mr M. Viney

Chair: Mr G. Rich-Phillips
Deputy Chair: Mr M. Viney

Substituted members

Mr B. Tee for Mr M. Viney
Mr D. Davis for Mr M. Guy

Staff

Secretary: Mr R. Willis
Research Assistant: Mr S. Marshall

Witnesses

Dr J. Carnie, chief health executive officer,
Professor C. Brook, executive director, wellbeing, integrated care and ageing, Department of Health.
The CHAIR — I declare open the Legislative Council Standing Committee on Finance and Public Administration public hearing. This afternoon’s hearing relates to the inquiry into Departmental and Agency Performance and Operations. Specifically the committee wishes to examine the Department of Health’s assessment report on the health impacts of the January 2009 heatwave in Victoria.

I welcome from the Department of Health Professor Chris Brook, executive director, wellbeing, integrated care and ageing division, and Dr John Carnie, director, health protection branch and chief health officer. For the information of witnesses and the committee we have two substitutions this afternoon — Mr Tee is substituting for Mr Viney and Mr David Davis is substituting for Mr Guy.

All evidence taken at this hearing is protected by parliamentary privilege as provided by the Constitution Act 1975 and is further subject to the provisions of Legislative Council standing orders. Any comments made outside the precincts of the hearing are not protected by parliamentary privilege. All evidence is being recorded by Hansard, and witnesses will be provided with a proof version of the transcript in the next couple of days for any corrections.

I now invite you to make an opening statement, if you wish, and the committee will then proceed to questions.

Prof. BROOK — Thank you, Chair. I have passed around copies of a short presentation to which I would like to refer if that would be all right with you. It should not take terribly long.

The CHAIR — Thank you, Professor Brook.

Prof. BROOK — Moving to the first colourful slide, there is quite a knowledge of the impact of heatwave in world literature. The strongest reference point is the events of 2003 in Europe which caught a lot of people by surprise, particularly the French. There was massive excess mortality. It is a large country, but there were more than 14 000 people in excess of normal who died in the heatwave event there. I should point out for those who love Paris that it is not a city that is air-conditioned and it is not usually a very hot city — but it was the whole of France. I must admit I am fairly fond of Paris myself.

Mr DAVIS — They all leave in the summer, don’t they?

Prof. BROOK — There was a problem there in terms of the doctors and authorities, too. We should not go there.

The CHAIR — Literally?

Prof. BROOK — The next slide simply says that even within a heatwave event you can expect different levels of stress in different parts of the state and we get very significant heat sink effect in urban accommodations. Clearly, more activity, more industry, more power, more heat, and that tends to be a problem. We should comment that although there are some differences in the definition used, it is not just the fact that it is a hot day or a series of hot days. That is important, but equally important is the mean temperature throughout day and night. If the temperature is up in the day and does not go down at night, the general mean temperature is significantly higher, and that is a significant cause of problems. I just want to point out that there are differences in local demography.

Mr TEE — It is air-conditioning units in cars that generate that — —

Prof. BROOK — It could be anything, but it is also simply bitumen roads, large concentrations of people and less capacity for natural cooling from air, trees or whatever.

The next slide relates to risk factors and what makes people vulnerable to heatwave. These things are kind of self-evident, but the most important thing is that the older we get the less able we are to adjust to heat. It is also true of very young babies, but it is much more prevalent with age. The capacity of the body to self-regulate, to engage in homeostasis, is reduced. A lot of old people, no matter what their state, are slightly dehydrated all the time. Many people do not recognise that as we get older we tend to drink less — water, that is. If that happens on top of somebody having one or more chronic diseases — a bit of heart failure, a bit of lung disease or whatever it may be — it does not have to be a huge event and it does not have to be the extreme end of heatstroke to cause somebody to fail and for them to be tipped into heart failure or whatever. That will simply
present itself as death, so the capacity to say ‘That person died strictly because of heat’ is extremely marginal if we are talking about much older people.

Not only old people are affected by this, but mostly we are talking about people who are well over 65 years of age. I will not go through the list, but obviously some drugs like diuretics, which are very common, impact further because they create further dehydration in some people; and, as usual, people with diabetes and people who are overweight et cetera are at greatest risk.

Turning to the next slide, in 2006 the department first issued a Victorian heatwave strategy, the most important component of which was to develop — and when I say ‘develop’, there are many steps through which we had to go, including testing — a Victorian heatwave plan. That plan will be released this month, I believe. Importantly, it has gone through a series of steps, including piloting of heatwave responses. At local government level the most important part of heatwave planning is engaging at the local level where people live. This is not about people, by and large, who are in care settings; this is about people who are in the community. There are various strategies. All local governments are now recruited into that program, and they have all developed local heatwave strategies we can refer to later if you wish. There are various manners in which they identify people who may be at risk — through their own programs or through other identification — and they can offer some supports.

If we move to what actually happened in January of this year, this of course was pretty much one week before 7 February, although the heatwave event started on 27 January. So we were actually well and truly in the thick of things in that week.

You will notice that there were four days altogether in which temperatures reached extreme levels but three days where temperatures were well up into the 40s and really did not decline, particularly overnight. The most notable of those days was in fact the 30th, which was the day on which about half a million households lost power due to a major transformer problem up near Sydenham somewhere, where those angry ants marched across the horizon in various directions. That took quite some time to resolve. That is potentially significant, although we cannot attribute things specifically to that because obviously people will have lost air conditioning and power generally.

So that was the zenith of it, and the temperature then dramatically fell the following day, only to subsequently rise to the event that we now know as 7 February, 2009.

Next, in terms of lead-up, we were in a position to generate significant media. The most important thing that the chief health officer can do in the lead-up to heatwave events is to be aware that they are going to occur and to get messaging out. We use all forms of electronic media that are available to us — television, radio and websites — and we go through local government and through all of our agencies in terms of preparing people for it.

There are agreed health messages which we send out, and the Nurse-on-Call service has proven a valuable service in terms of enabling people in the community to ring and gain advice. The advice is not only about practical steps that you might take to take care of yourself but also simple cooling messages, whether it be wet blankets or towels or some form of cooling, about how to help other people who are in distress and what to do if they are in distress to the extent of needing help.

Throughout all of this time the department’s emergency coordination centre was operating. This is a dungeon on the first floor of 50 Lonsdale Street, where I spent the latter part of January, all of February and much of March. It is a joyous place!

Of course there is also some discussion in this part of our submission about websites, and at that time we had only a limited number of local government heatwave plans in pilot, and ironically — or I suppose there is a positive way to look at it — this really showed us what was useful and what was not. For example, Wodonga City Council had a really impressive outreach program, and it was then able to share that with a lot of other people as the program became statewide.

All health and emergency services were activated for responding to the heatwave alert. It is important that at the local level every effort is made to identify vulnerable individuals. Obviously that will mostly happen through their own family and/or through carers, but it is at the community level where people suffer and where you are
likely to see excess mortality. Obviously we need communication, community awareness and the capacity to impart what is going on through the best information we can.

In terms of the report itself, I think you are all well aware that in that one-week period there were 374 excess deaths compared with exactly the same period the year before — and we looked at that over more than one year to crosscheck. That is a 62 per cent increase in total or all-cause mortality, with the greatest increase of deaths in those 75 years of age or older. But there were excess deaths in younger age groups as well, so this is not only for people who are 75 years or older.

There are various ways in which the data that has been collected is verified. Actual death numbers are a combination of the births, deaths and marriages register and the Coroners Court, in terms of cases that may not have actually been notified because they were going through a coroner’s process and because of potential double counts. So that is how we can be very sure about the figure of 374. But there is other data in the report, and I am sure you will want to ask Dr Carnie about that.

There was a significant increase in presentations to emergency departments, and some but by no means all of those could be directly attributed to heat. There was a very significant increase in patients who were dead on arrival and a very significant workload issue for Ambulance Victoria being called to people who were deceased. That is a very large resource-consuming exercise. Obviously it is entirely appropriate, but Ambulance Victoria can be said to have shown the largest stress in the system, and that is something which they are directly planning on dealing with should anything like this occur again.

The next page of the submission deals with mortality, with two lines on the graph. The blue line down the bottom is background mortality — so people die every day of every year, and that is what would happen in a normal year — and the heavy red line is what actually happened this year, and then you have temperature in the orange with the stars along the line so that you can relate when people died to what the temperature was.

When you look at excess mortality and when you look at death information you can rarely say which person died because of heat or because of the effects of heat; so if an older person dies, that may be because they have simply reached the end of their life so their systems have given way and you can call it cardiac arrest or anything you like or simply say, ‘Died’. If another person, who actually may not have died at that time, suffers just moderate dehydration — nothing particularly significant — and as a result their systems fail and they die, you cannot tell the difference. The only thing you can tell in general is what are the macro numbers, and then you get some feel from these various other sources, and most importantly you get information from attendance at people’s homes — what were the presentations, what were the things that were important to deal with for the future?

A great deal of subsequent activity has occurred, and I will not go through all of it, but I did mention to you that heatwave plans across all of local government are now well and truly in place. We have funded $2 million for that. We have had much greater engagement with the Bureau of Meteorology and all forms of our services; trigger thresholds; a surveillance system; and as I said, we will be releasing a statewide heatwave plan this month, which may seem as though it is a long time from 2006, but I did mention it really does take time to actually get the right sorts of responses and to test them before you can issue it as a plan. Notwithstanding that, we do have the elements of the heatwave plan in action in all local government areas. Thank you.

The CHAIR — Thank you, Professor Brook. Dr Carnie, do you wish to add anything at this point?

Dr CARNIE — No.

The CHAIR — Thank you very much. The committee will proceed to questions now. As with the previous session, we have the shadow Minister for Health, Mr Davis, so I will invite Mr Davis to take my block of questions at this time.

Mr DAVIS — I guess the first point I would make — is your report publicly available?

Dr CARNIE — Yes, it is on the website.
Mr DAVIS — It is on the website, is it? I think it would be something I would like to go through in some detail. The second point is: what lessons have we learnt from other jurisdictions ahead of time; how well-prepared were we actually for this event?

Dr CARNIE — I think it is fair to say that Victoria is probably ahead when it comes to heatwave planning.

Mr DAVIS — Ahead of?

Dr CARNIE — In terms of heatwave planning for preventing morbidity and mortality. The only other state that has a fair degree of planning done is, I guess, South Australia, and that is probably because they tend to have longer runs of fairly hot days. We have had a national summit, if you like, of health authorities around the country, and it would be fair to say, as I said, that Victoria is quite ahead. We have done a great deal of work in terms of preparing for and knowing how to respond to heatwave events. With the amount of work that they are doing in surveillance, the research that we have contracted out to give us threshold values so we know when we can expect to see increased morbidity and mortality in terms of temperature thresholds, in that sort of work we are leading the way.

Mr DAVIS — What are the major holes now or the major areas where we need further work to be prepared for the forthcoming summer and beyond?

Dr CARNIE — I think it is just bringing all this work together. As Dr Brook said, the councils have done all of their planning, and our job is really to do coordination to make sure that the same sorts of plans are in place, and they are looking at that now. The heatwave plan that we have mentioned is really a bringing together of all of this work that we have been doing over the past few years.

Mr DAVIS — So other than the coordination role we are in a good position now and there is not much more to do?

Dr CARNIE — We can always keep reiterating the message. I guess the main issue here is public awareness and also making sure that the most vulnerable people in the community are protected during periods of extreme heat stress. That is not something where we could say, ‘Yes, that is done, and we do not need to do anything more’. I will still need to keep giving this message, and I will do so every time there is predicted to be an extreme heat event, sort of making sure that the public knows what to do and making sure people do not do silly things like exercising and engaging in heavy physical exertion during periods of extreme heat events, but most importantly, keeping an eye on the most vulnerable people in the population: the elderly and people who are isolated, living alone, people with chronic medical conditions.

Mr DAVIS — But aside from the coordination and education role you are fairly happy that we are in as strong a position as we can be?

Dr CARNIE — We are in a strong position, yes, and the other issue is that this is a partnership. This is not the Department of Health working alone. We have a number of agencies that we are working with: Ambulance Victoria, some of the non-government agencies, the people who look after the personal alert system and the people who look after public housing. We are working with all of these partners to ensure that the same sorts of messages get through in relation to protecting the vulnerable.

Mr DAVIS — Are community health centres involved in this?

Dr CARNIE — Part of our communication strategy is including community health centres, yes.

Prof. BROOK — If I might add, I think we also need to see this more broadly than even just as people in the community. It is a whole range of resources. We have provided resources not only through local government but to the HACC service system. It happens that that is predominantly local government in Victoria, and very proudly so, but that is in order to enable all local governments to have some capacity to provide additional HACC hours to people who are isolated and vulnerable. As I said in my presentation, local governments are best placed to identify those people. They are usually the providers of home support services.

In addition to that of course we have seniors registers. There are now 43 active seniors registers designed for a variety of purposes. I think they are in fact now called community registers, and they can identify people who would not necessarily be seen as part of the direct health response, so people with disabilities who are clearly
more vulnerable. Again there is a very heavy emphasis on them, and of course there is a whole different subject matter about hospitals and other care settings, including residential aged care, in which we are very active.

Mr DAVIS — Is there a specific additional budget allocation?

Prof. BROOK — For some of these things there is. For local government activity in the HACC space there is; for local government heatwave preparedness there is. For any capital works that might be required for some infrastructural issues there is, but in some areas it is not — —

Mr DAVIS — The coordination.

Prof. BROOK — It is mostly coordination, but in some areas, like for example the private or not-for-profit residential aged-care sector, they are not all thus, so that is a matter for the commonwealth to take into account. By and large, however, people in such settings are at least risk probably, compared with people in a community who have no care.

Mr DAVIS — What is the value of the additional allocation?

Prof. BROOK — I have got a table somewhere, I am just trying to find it. I can tell you, for example, that the additional HACC funding just announced is $1.25 million and the additional money for local government heatwave preparedness is $2 million, and about $7 million in capital has gone into infrastructure for areas where things needed some mitigation, so $2 million for pilot projects and council funding.

Mr DAVIS — That is the total, though, there is no additional on top of that? That is the total amount? I am just trying to get a breakdown, if you like.

Prof. BROOK — Correct, these are total amounts, so if they need supplementation in future years, we have to take that into account. The HACC budget is a big budget, so it is not that we are going to withdraw funding, it is just that we have allocated this funding for this year and we need to look again at that allocation next year, should the money be required. A lot of this is one-off, though. It is about people establishing systems, but if they need extra resource or extra HACC hours, that is pretty much something that we can automatically fund in an ongoing way.

Ms BROAD — Professor Brook, at least for those of us who are not climate change sceptics, those of us who accept the overwhelming weight of scientific opinion about climate change, it is reasonable to assume that there will be more, not less, extreme heat events in the future. Can you outline for the committee how you expect, in response to future extreme heatwave events, the department will respond, and if possible, how that will change from how it may have responded in the past?

Prof. BROOK — The relationship between what we have seen this year and over recent years — and climate change I think we do have to be careful about — the Department of Health is very much leading in responding to climate change, which we accept as a very real phenomenon, very soundly, scientifically proven, but you do need to be always cautious about relating a generic event to short-run cycles. I have to say that. The touch and feel of it is that we are getting many more very hot summers and many more very hot periods within those summers. Clearly, our responses are quite different today than they were two or three years ago. We are doing things today in a way that we did not do just a few short years ago. The theory was there, but it had not been put to the test.

Just on that, I should comment that the reason that we put effort and energy into this is because in working through the issues of climate change, we determined early that this was something for which we really needed to be in some senses prepared for. That goes to an earlier question; our beginning, our planning in 2006 was centred around the concept that we were going to get this happening as part of climate change, apart from anything else. It behoves us to be in a capacity to be able to really lay out carefully all the component parts of what we will do, whether it be through support for individuals, whether it be through support for local government, weather it be through really having, as best we can, planning which is more about intelligence than it is necessarily about operational planning — for example, Ambulance Victoria; I suppose you could call it a subset of health, although they probably see themselves a bit differently.

Ms BROAD — That is not what they said earlier today.
Prof. BROOK — Ambulance Victoria has already changed its operational command arrangements for heatwave events, so the good Paul Holman will have a different team of people and more people present whenever we are able to give intelligence. To do that we need to have better information, we need to have better mapping, and those things are happening, not just for heatwaves but also for bushfire preparedness. We need to be in the business of being potentially more flexible in terms of our responses, and in a really severe event this will go to things like surge capacity; how are we able to, on the one hand, reduce some activities in hospitals so that we can take a surge from the community. Hospitals coped very well during the heatwave event and subsequently even through the bushfires, so that part of the system, though busy, did not cause major stress. But we need to be in a position to be able to flexibly respond.

That is easy to say; it is really hard to do, because these are really big systems and the inertia — trying to get quick change — is extremely hard and can be extremely disruptive, but we know the system can do it. It has been tested previously. It was tested in the Longford gas disaster and we had a tremendous response at that time. Somebody is going to have to, nevertheless, lead that, and that falls to a large extent to us, so we have a whole range of quite different coordination command and control structures this year than we had last year.

I, for example, carry the exalted title of state commander health and medical (emergency management). This is not a title anybody wants, because it means you get stuck in airless rooms without windows for extremely long periods of time trying to authorise resources and activities. That could not have happened and did not happen even two or three years ago. There is actually a huge amount of activity which is really, in a way, kind of boring. It is people planning and methodically putting in place action. The most important thing we can do as a department is to demonstrate our capacity to authorise things quickly and get actions happening, if that is needed, during an actual event. By far the most important thing we do in between events is, as John said, planning and then engaging both the citizenry and all of our service delivery, all of our service operators, for how they might be part of that response for individuals.

Ms BROAD — Could I ask another question in relation to the matter of support for particularly vulnerable people? The government has recognised, in preparation for the new fire season that we are now in, that community action, supported by local and state government, is a very important part of identifying and supporting vulnerable people in the community, and a whole range of measures are being put in place and supported to that end. In your presentation you referred particularly to the Wodonga Outreach program in relation to heatwave experience, and that is part of the region I represent, so can you outline for the committee what you are able to about that particular program and more generally action which is focused on supporting community action in the way that the government is supporting community action in relation to fire preparedness?

Prof. BROOK — Yes, I am happy to talk to you about the limited knowledge I have of the Wodonga program, and I am certainly very happy for Dr Carnie to offer any information he has. The Wodonga program started with — and I should say I would be more than happy to provide information about this on the record, as it were.

The CHAIR — Thank you.

Prof. BROOK — The Wodonga program started, as a number of them did, with a group of people who were not quite sure what they were supposed to do, but they were energetic, and the coordinator of that particular set of activities — and I cannot recall her name — made a great point of the fact that when she began the coordination of the heatwave activity, there was very little traction. Nobody was particularly interested. People sort of said, you know, ‘What do you think you are doing?’. ‘Heatwave? What heatwave? We are all right up here’.

But of course as time passed their value was proven, so what they did basically was to look at the sources of information that they might be able to bring together about who was vulnerable in their community, and they found that people had surprisingly rich information. So that was the first surprise — that generally the people who were vulnerable were known to one or other service providers, and when they joined together their information, they could provide a pretty comprehensive assessment list.

Not everybody wants a guardian angel, so obviously there is an element here of personal choice, and also of privacy, but they also discovered that they had number of facilities and opportunities that they could use. They are not looking for a health-care setting, but they are looking for somewhere that can offer reliable air
conditioning, for example. They found a number of clubs and things like recreation facilities and sports facilities and other facilities where people were only too happy to be able to offer an air con break, should it be needed.

We have to remember the heatwave event that we saw in Melbourne was milder by some degrees than the heatwave event in northern Victoria, so the heatwave event in northern Victoria from west to east was more significant and longer than the heatwave event in Melbourne. When January came along they actually got information and they got agreement from various parties — it all sounds a bit loose, but people did swing into action. The community was able to provide advice. They were able to provide some relief for some people, and I do not mean in a relief centre. I believe in the Macedon Ranges they call them 'hot day spots', so every local government will have a slight variant on this. But they were able to provide those services, and people were tremendously impressed. It demonstrated, and a lot of councils were pretty unsure of all this, that a relatively small investment could produce quite a positive result.

Obviously you then need to look at how you resource a coordinating function for that sort of thing in the longer term. They are issues that we will always face on an annual basis, but I think that covers the total extent of my knowledge about Wodonga. So rolling that out has involved some statewide forum activity and the engagement of a lot of councils, together and separately. John, do you want to add to that?

Dr CARNIE — Just to add to that that Wodonga is one of the councils that has a very impressive and excellent heatwave plan, and clearly they have been really up to getting all that information together, getting all their local groups together to do an excellent and very impressive plan.

Ms BROAD — Perhaps the committee could request from Wodonga City Council documentation of their plan for the benefit of our inquiry.

The CHAIR — Certainly. I do not know if the Department of Health is in a position to provide that.

Prof. BROOK — I am sure we could coordinate.

The CHAIR — Thank you.

Ms BROAD — I am sure they would be pleased to provide it.

Mr BARBER — Just listening to all that has made me think of a question. How many of those 374 deaths that occurred last January would have been preventable?

Dr CARNIE — It is not possible to specify that for the reason that that number, just to explain how that number is arrived at — —

Mr BARBER — I have read your report.

Dr CARNIE — The total number of deaths does not indicate to us where these people were or what they died from. That will need to await much more detailed information, which might be possible through the Australian Bureau of Statistics in relation to the actual causes of death. All we can say is that many extra people died during that week compared to the preceding five years at the same time of the year.

Mr BARBER — But surely the purpose of this plan is that if the same event occurred, you would like there to be no blip in deaths over the same period. So I ask again: what measures could you have taken to ensure that that blip of 374 deaths did not occur?

Prof. BROOK — I think we have to be very realistic about just what 374 deaths means. Given that the majority of people who died were over 75 years of age, the whole notion of prevention is a very relative concept. What we do not know at this point in time is what in fact has been the whole-of-year mortality outcome. Did these people die who might otherwise have lived only weeks or months? I do not wish to sound the remotest bit casual about this, but we need to be very clear about the relativity of what we are trying to achieve in prevention. If there are people in younger age groups or people who have a chronic disease or set of chronic diseases, because it will usually be more than one, who could otherwise be expected to live a reasonable period, then that is as much what we are trying to prevent as general benefit to the community.

This means that not only do people have to be vigilant, they have to be extra vigilant when they know that their loved one or the person for whom they care is at risk. For example, someone who has mild heart failure and
diabetes — very common — and a bit of obesity, that person may actually live for many years happily, but they get a bit dehydrated, things tip over, nobody rescues them and then they suffer a stroke event or a heart attack because they form a clot or whatever. It is actually extremely difficult for us to be precise about how many would have been long-term preventable. Any of those we would prefer not to have happened. I think you are right: we are aspirational. We would like to actually have a situation where, recognising that deaths do occur every day, we had the minimum number of excess deaths just due to heat.

Mr BARBER — Dr Carnie, in your presentation on the Victorian experience of 2009 you reproduced a chart from Nicholls et al. from the *International Journal of Biometeorology* — this is on the website, not in the version you handed out today. It is this chart and this presentation that you did some while ago. On the front of this document it says *The Victorian Experience — 2009*, Dr John Carnie, chief health officer. It is on your website.

The CHAIR — Do you have a copy that Dr Carnie can look at?

Mr BARBER — Yes, I can pass that over. It is quite a simple question really. Would you say that the response function to heat, as known from the literature, is linear or exponential?

Dr CARNIE — I am not sure I can answer that immediately. We know that there is a J-curve in relation to mortality. We know that there is a minimum range of temperatures at which the mortality is minimised, and we know that when the temperature starts to rise then there is certainly a rapid increase in mortality, just as there is when the temperature falls. As the temperature falls, there is an increase in mortality. What we are attempting to do with the help of Monash University is to determine threshold points for the increase in mortality. It appears as though there are certain mean temperatures above which there is certainly a rapid increase in mortality.

Mr BARBER — Mean dailies.

Dr CARNIE — Mean dailies, yes — the maximum day temperature together with the lowest night temperature, and the mean of those two. It appears as though for Melbourne, for example, that mean temperature could be around 30 degrees. It is the hot days followed by hot nights that appear to be significant in terms of morbidity and mortality.

Mr BARBER — I understand that from the point of view of triggers. What I am asking about is, though, after the triggers, do we expect a linear or an exponential response of deaths?

Dr CARNIE — I do not have the data to be able to say that for sure.

Mr BARBER — So there is no actual publicly available Victorian heatwave strategy document at the moment, is there?

Prof. BROOK — There is a strategy document, but the plan will be coming out this month.

Mr BARBER — Everywhere I go I read Victorian Heatwave Strategy — spelt in capitals — but I cannot get that document that is called ‘The Victorian heatwave strategy’, can I?

Prof. BROOK — You should be able to. That is a 2006 — I am not quite sure in what form that comes. Where is it?

Mr BARBER — I have got a printout of your website there.

Dr CARNIE — There was a document called ‘The heatwave strategy’, but you are quite right, though. I think what you would like to see is the statewide heatwave plan, and that is going to be ready very shortly.

Mr BARBER — From this heatwave that we just had in November, have you got data on the effects, perhaps from the ambulance callouts, that we saw then?

Dr CARNIE — Not from this November. What we had was a few hot days. We really did not have, by definition, a heatwave as such, because there was night-time cooling, and we did not really have a huge increase in calls in relation to that issue.

Mr BARBER — So you have sought that data, though, for November?
Dr CARNIE — I do not have that data from November, no.

Mr BARBER — There are two questions. Was there a response? And secondly, did you actually seek that data to see if there was a response?

Prof. BROOK — No, we did not reach our internal trigger point for what we would consider to be a heatwave event. There was no mass activity, though local governments naturally did get in on the action. November may have been the hottest November we have ever had, but it was interrupted by periods of coolness and periods of rain — and may there be much more. We can, if you wish, provide you with data for the hot periods in November. We will need to seek that, so I will have to take on notice.

Mr BARBER — An article in the Moonee Valley Leader of 23 November quoted a number of residents. It says that last January more than 100 people came out of their high-rise apartments and slept in Debney Park. The article says also:

Other residents complained of sleepless nights, breathing problems, heat exhaustion and their children getting blood noses because of the heat.

Is blood nose, from vasodilation perhaps, a common symptom of someone who is in heat stress or is it a known symptom?

Dr CARNIE — It is not commonly described. You would expect there to be some degree of vasodilation as a result of increased body temperature, but it is not commonly described as one of the common symptoms you see.

Mr BARBER — Your trigger temperatures, are they based on forecast temperatures or actuals?

Dr CARNIE — The trigger temperatures — what is going to be in our heat plan is a couple of thresholds. These are based on research that has been done trying to do a correlation between mean temperatures and mortality. When there is predicted to be a temperature around, say, 40, what we would put into effect is a kind of heat warning and then when the predicted mean temperature is going to be 30 or greater we would put out heat alerts, which is then the high level.

Mr BARBER — So they are based on predicted temperatures for the coming two or three days?

Dr CARNIE — That is right.

Mr BARBER — What about the risk that actuals can be higher than forecasts? If your plan is not being triggered because the forecast did not tell you to, could we not end up with some problems there? Would you not be better off with a more probabilistic rather than a hard trigger that says, ‘If it’s 32.9 we do nothing but if it’s 33 we suddenly do something’?

Dr CARNIE — Sure. In a sense we have already done that, because a lot of the information that we have sent out — a sort of pre-warning, if you like — to councils and community groups and so on is based on the proposition that if you are expecting a really hot summer, these are the sorts of things that you have to have in place in order to prepare for those events. So it is not that there has been nothing done.

There has been a lot of work done in terms of preplanning and even in relation to public messaging like the heat health messages that were part of the public information in the Herald Sun where there were messages. This was all part of the bushfire preparedness and so on.

Mr BARBER — Apart from warnings, under all these plans which you say will be the collation of the local government plans, certain people do certain things at certain triggers. Leaving out warnings, how are those triggers going to be defined, will it be through forecast temperatures or actuals?

Dr CARNIE — It will be forecast temperatures, but obviously we will be recording and looking at the actuals; if it appears that the actuals are going to exceed the forecast, then we have the ability to swing into action extremely quickly.
Mr BARBER — You say ‘extremely quickly’. Most of the deaths start to occur within two days, so what do ‘swing into action’ and ‘extremely quickly’ mean — that is, apart from warnings, which you have told us you do?

Dr CARNIE — The councils are ready to go into action, and we can be communicating with councils extremely rapidly to ensure that they put into effect all their planning if it looks as though the actuals are going to exceed the expected by a great margin.

Mr BARBER — Will the councils be designating things in their plans? We have neighbourhood safer places for bushfires; are there going to be neighbourhood cooler places, like you were discussing in the Wodonga example?

Dr CARNIE — Some of the councils have taken that approach. We have not given any sort of prescriptive approach in relation to that. It is really a local issue as to where the best place would be. There is a problem with being prescriptive about taking all the vulnerable people in a given municipality to a given place. There will be people who wish to make their own arrangements, there will be people who have adequate cooling in their own homes and do not need to be taken out and so on. So that is really a local planning issue, and each council is really addressing that issue in their own way.

Mr BARBER — But you are overseeing all that?

Dr CARNIE — Well, we are coordinating the planning, yes.

Mr BARBER — You put out a guide on how to plan, but you are not actually prescribing that there must a certain number of refuges available, for instance?

Dr CARNIE — No, we are not doing that, no.

Mr BARBER — Has anybody monitored the temperature in Office of Housing apartments, given that we know, the literature tells us, that upper storey, north-facing apartments are very risky locations?

Dr CARNIE — The Office of Housing now has a plan in place in order to keep track of elderly people in public housing and there is a system in place to ensure that when extreme heat events are occurring, those people are looked after.

Mr BARBER — Are you referring to the register that they can sign up to, to receive a call?

Dr CARNIE — No, that is a different issue. There is another system for vulnerable people in public housing to be monitored.

Mr BARBER — And removed?

Prof. BROOK — I think that probably is the same. It is the keeping-in-touch service. Originally those aged 80 years and older in north and west Melbourne and now all public health clients aged 75 or older receive at least a weekly telephone call. This is on top of things like Personal Alert Victoria, for which the client group may equally be eligible. That is about checking from the Department of Human Services the general wellbeing of the client. I cannot answer who monitors temperature in high-rise buildings. With the split of the departments, I would have to put that question to the Department of Human Services.

Mr BARBER — Who would make the call to actually evacuate a building, given that these are not the sort of people who can afford to take themselves to a motel for the night? Would you make that call in your little bunker you have described, your airless room, about all these other people in all their airless rooms?

Prof. BROOK — No. It is hard in fact to envisage an actual evacuation simply because of high temperature. The general response is indeed an individual one. I repeat: this is going to be about family and friends and carers making decisions and trying to care appropriately for vulnerable people, whether they are in their own family or
in their own home. In the event that somebody is at the point of needing any kind of medical assistance, then they would have exactly the same access as anybody in the community to paramedic assistance and/or hospital care. It is based on an individual assessment, not a building evacuation.

Mr BARBER — Sure, but social isolation itself is a vulnerable factor. By definition it is the people who do not have friends, family or carers that we are most worried about. They will get their weekly call from the Office of Housing program, or alternatively under the Lisa Neville program, from a volunteer at 30 different community registers. Can that person possibly make an assessment that the person they are talking to is okay or needs some advice or needs someone to call an ambulance for them?

Prof. BROOK — I cannot speak for the activities of housing. I am just not able to; I would need to ask you to pose that question direct to them, I think. I can talk about the extended HACC program — and that is, as I mentioned earlier, $1.25 million which is designed to ensure that there are additional HACC hours purchased so that exactly the situation you are describing can be addressed.

If somebody is known for whatever reason to be isolated and vulnerable, remembering that the client group you are talking about is often a recipient of HACC services already so they are known clients, in those circumstances the person who would be doing the visiting would almost certainly be a nurse, and they would make an assessment of whether people are coping or whether they need immediate assistance. Clearly if somebody has the obvious signs of heat stress, they are in trouble and they need help. But it is the early part, we are trying to prevent getting to there.

Mr BARBER — I am still interested. There are obviously options somewhere between the spectrum of an ambulance and a wet flannel?

Prof. BROOK — Yes.

Mr BARBER — I am still interested to hear what those options will be. You say they will be in local council plans according to lots of councils decisions. Can you tell me, or take it on notice, how many extra HACC hours that is, rather than how many dollars it is?

Prof. BROOK — I must confess we always have problems when we try to convert monetary units into what are sometimes called standard equivalent values. Today is probably not the day to go there. Can I take it on notice and come back to you, because I do not have the latest HACC hourly nursing rates with me?

Mr BARBER — Do you know how many people are on these registers — the community registers and also the Office of Housing register?

Prof. BROOK — I cannot speak at all for the Office of Housing. I can find out how many are on the community registers. I do not have that information with me today.

Mr BARBER — I have two final questions if I can slip them in, Chair: under the UK plan they have level 1, 2, 3 and 4 responses, with level 4 being emergency; and emergency is in the situation where we would expect non-high risk groups to be starting to be affected and for that matter quite likely water and electricity problems and a whole range of problems. Do you have that level 4 emergency response in your plan?

Prof. BROOK — Are we talking about a heat plan here or a general plan?

Mr BARBER — An NHS heatwave plan for England.

Prof. BROOK — I am not familiar with it. I would need to look at what it is that they are describing. Certainly I am aware that the work done in the United Kingdom, which has been drawn to my attention in relation to infrastructure, talks about things like power system failures and the consequences of them. Obviously we are reliant on working with others to determine things like the risk of power system failures. That is work that is conducted predominately through the CGRC, the coordinating group across government for people and bushfire preparedness.

Mr BARBER — Do they have something like that for heatwaves? That is what I am asking.
Prof. BROOK — I do not produce something that can tell people whether their power is going to fail. But there are people who do that. The question of health infrastructure is something which is of great interest to me, but it is not possible for me to make predictions. We can do everything we can but that does not go to an external threat.

The principle of general emergency planning in health is captured in the ‘all hazards’ approach and it does have scales for relative risk over a range of events. It is best that I provide you with detail of that on notice. The sorts of things are for health facilities, not for individuals, generally covered in what is called code brown, which is external threat. So what is it that you are responding to?

But I will give you an example of how we approach, for instance, power security in health infrastructure — remember we are talking here about hospitals predominately. Certainly all large hospitals, and most metropolitan hospitals, are included in that, have at least two input lines to carry electricity. So they are served by not one but two input lines. That does not guarantee that they will get power from either, but it is better than not.

Mr BARBER — No, I am asking about administrative arrangements. But it sounds like a sort of a state of health emergency thing, that those powers and more are perhaps at the ministerial or cabinet level. Is that right?

Prof. BROOK — I think you are asking for codification that may cross lots of territory.

Mr BARBER — Exactly.

Prof. BROOK — That would indeed be at cabinet level and the state emergency coordination arrangements, including the coordinating group across government.

Mr BARBER — I have 130 residents over the age of 75 in the North Richmond high-rise.

Prof. BROOK — Yes.

Mr BARBER — If things got so bad that a large number of them started presenting to the North Richmond community health centre, you would not just leave them on their own, would you? It would not just be the CGRC’s problem?

Prof. BROOK — No.

Mr BARBER — If they were sitting around waiting for treatment and ambulances were not available, what would happen?

Prof. BROOK — The long answer — we will not have a long answer, we will have a short answer. If something were as extreme as that — and you would have to agree that would be pretty extreme — and you had 130 people in North Richmond alone who were suffering from sufficient stress to need immediate assistance, that would be what you might call an overwhelming incident. You would have to assume that everything that it was possible to do would be done. That is a simple statement: How would we manage a situation like that?

Mr BARBER — Or a number of situations like that happening all over the place — all over the inner city, for example.

Prof. BROOK — Well, clearly that is the point, if you had 133 people — or any number of people: 10 people, 50 people — in North Richmond and that was reflective of what was happening across the community, you would have an enormous situation on your hands, and we would do whatever we needed to in those circumstances. But that would be an immediate response issue, so if they needed hospitalisation, we would have to look at our capacity to generate a surge capability for them.

We would deploy teams of people to them, so we would have VMAT teams — medical assessment teams — and other teams, including field emergency management teams. It would be treated as a genuine disaster. What would happen would be the whole system would rejig itself to deal only with that event. We would, in the manner that we can, set up all of our systems.
My job is to provide an authorising environment — that is, it is a command job — in this part of this thing. If something needs to happen, I do authorise it. It is an interesting situation to be in. If somebody rings through and says, ‘We have big problems; we have not got enough IV fluid’, I will find a way to get it there.

Mr BARBER — Have you got powers to do that, you do not need to refer to the minister first?

Prof. BROOK — There will be situations in which I would have to probably refer to the secretary. I do not have statutory powers, no. My job would be to authorise, to allow people to spend money and to do things that may be quite unusual and in certain circumstances, through the secretary, to direct.

For example, you may need to direct that certain forms of surgery are simply not conducted for a period of time. I think we have to be careful not to get too hypothetical here, because if something is of such a scale as that, you are talking about statewide disaster, and really everything else become secondary to it.

Mr BARBER — My final question is: do you look at the acute effects of ambient air pollution when you are looking at these sorts of issues as well? Or is that just in with the mix of factors that you know causes problems?

Dr CARNIE — It is in the mix of the factors that we know. Obviously, empirically when heatwaves are associated with bushfire events as well, then it is certainly likely that air pollution levels be much increased. In the inner city it can also be an issue that hot days and increased air pollution certainly add to respiratory distress for people with pre-existing respiratory conditions.

Mr BARBER — But it is not a formal trigger. There is not that much precision around it?

Dr CARNIE — It is not an absolute trigger, no. The triggers tend to be in all terms of mean temperatures.

Mr KAVANAGH — Thank you, Chair, before asking the witnesses a question I would appreciate your guidance on a matter. On behalf of the people of western Victoria, I would like to ask you about the appropriateness of asking Dr Carnie about fluoride.

The CHAIR — As it relates to a heatwave event?

Mr KAVANAGH — No.

The CHAIR — The two witnesses were invited today specifically in relation to the response to heatwave. I do not know if Dr Carnie is in a position to answer — it is probably not fair to put him on the spot by asking him to answer a question about a matter he was not necessarily expecting. Dr Carnie, I do not know if — —

Mr DAVIS — You could do an inquiry on health generally and the annual report.

Dr CARNIE — I am happy to answer a question on fluoride.

The CHAIR — Okay, Mr Kavanagh, if you have only one question on this fluoride issue?

Mr BARBER — You get to play your joker on this one.

Mr KAVANAGH — Actually I have several questions.

The CHAIR — We are here on the heatwave response matter. But Dr Carnie has agreed to take your question.

Mr KAVANAGH — I ask you, Dr Carnie, on the subject of fluoridation of water supplies, that although there is evidence of benefit, there is also scientific evidence of detrimental effects of adding fluoride to water supplies, aren’t there?

Dr CARNIE — The only scientific evidence that exists in terms of a theoretical deleterious effect is on dental fluorosis, and this happens at relatively high levels of fluoride in the water. This certainly is a feature in some countries in which the natural fluoride levels are in the range over 2 parts per million, sometimes 4 or higher.

But at the level of fluoride that is used in water supplies in Australia, which is generally around 1 part per million, we know that dental fluorosis if it occurs is of minimal nature and usually only a cosmetic issue.
Generally it cannot be picked up by the public, it is only a trained person who can pick up dental fluorosis at that sort of level. There is no other scientific evidence of any other deleterious effects of fluoride at the levels used in public fluoridation programs in Australia.

Mr KAVANAGH — So you do not accept any evidence of brittle bones, osteosarcoma rates, or even — —

Dr CARNIE — No, we do not. There is no scientific evidence on that. The osteosarcoma story began with a study from Harvard where a partial study was reported prematurely by one of the researchers, trying to show that there was a slightly increased rate of osteosarcoma in boys rather than girls. The full results of that study have never been published, and in fact there was a letter from the leading person in that study who said that it was quite premature to come to any conclusions based on those preliminary results.

We have in fact looked at osteosarcoma rates in Victoria versus Queensland over the past 25 years. As you know, Queensland has not had fluoride in its water until this year. There was absolutely no difference in bone cancer rates between Victoria and Queensland over the past 25 years.

Mr KAVANAGH — Wouldn’t you then say that your answer is that you reject the evidence that is there as weak, rather than there is no evidence?

Dr CARNIE — There is no accepted scientific evidence. The National Health and Medical Research Council undertook a systematic review, and that review included the issue of cancer, and the conclusion was that fluoridation of water supplies is safe and effective. The fluoridation of water supplies is also supported by the Cancer Council of Victoria, which they would not be doing if there happened to be some relationship with bone cancer.

The CHAIR — Thank you for your indulgence on this matter, Dr Carnie.

Mr KAVANAGH — You are asking me not to ask any more questions?

The CHAIR — It is not within the terms of reference, Mr Kavanagh.

Mr KAVANAGH — I am happy to be guided by your advice, Chair.

The CHAIR — Dr Carnie has been very gracious in taking questions on that matter.

Mr KAVANAGH — I will take your advice, Chair.

The CHAIR — On the heatwave, Mr Kavanagh?

Mr KAVANAGH — On the heatwave, the evidence that you have presented, Dr Carnie, shows particularly that there is a lag between high rates of heat and subsequent deaths — that it takes, on the basis of this chart, perhaps three or four days before mortality really accelerates in line with increased heat. You have an interval in which to act, plenty of time in which to act, really. With the heatwave plan that is being developed, would that include using that time in such a way as to advise the public on actions they should take through public service announcements?

Dr CARNIE — Absolutely. This is where the predicted temperatures are really important because if there are predicted temperatures in the following week that are going to come into the extreme heat event category, then we would be very active out there warning people about what to do and what not to do in relation to trying to reduce morbidity, certainly.

The CHAIR — Thank you. Dr Carnie, I would also like to discuss this slide on mortality and the issue that Mr Kavanagh raised about the effective delay between the peak in the heat event and the actual deaths occurring. You have identified 374 excess deaths. Have you been able to — and you are probably not able to answer this, given what Professor Brook said earlier — identify whether the excess deaths related to people who were known to various service providers?

Dr CARNIE — No.

The CHAIR — I accept you have not identified who those 374 are, but is there an increased correlation in the total number of deaths in that period in January? Is there a higher percentage known to service providers
than would ordinarily be the case? Can you draw a conclusion that these excess deaths were known to service providers?

Dr CARNIE — We cannot draw any conclusion on that because the data that this is based on is entirely anonymous. All we had were total numbers, and that is all that the registry was prepared to give us for this kind of report because the much more detailed analysis occurs when the data is coded and finally reported on by the Australian Bureau of Statistics. You get a lot more detail then but that reporting takes a lot more time; it can be up to two years after the event that that very detailed data becomes available. For this report, all we had was total numbers and the age at death.

The CHAIR — The reason I raise the issue is that it seems to me that, given the two-day lag between heat event and death, if these people were known to service providers, there was an opportunity for intervention and how come we did not see that, but if we cannot make that correlation at this point — —

Dr CARNIE — What we do know from the theoretical point of view is that people with chronic medical conditions are obviously at greater risk, and so you would expect that a lot of these people would be known to the service providers. For these numbers, we do not have that data.

Mr DAVIS — On a similar point, it does not seem to me — or perhaps you can tell me differently, Dr Carnie — that you can actually provide the location of where these 374 people lived.

Dr CARNIE — No. We did not have that data. All we got was the total number according to age.

Mr DAVIS — Is anyone following this up in a way that would look at the epidemiology of this?

Dr CARNIE — Yes, absolutely. That is part of our further work in this area — to get that additional data and to look at it in terms of what these people actually died of, what the death certificate said, where they lived and so on. That is further work that we are undertaking.

Mr DAVIS — Do you have a time line on that?

Dr CARNIE — It takes a much longer period, as I said, because the Australian Bureau of Statistics, which does this work for the registry of births, deaths and marriages, can take up to two years to provide that sort of data.

Mr DAVIS — There seems to me another source of data — the mortuary information — and as I understand it, the mortuaries were full and indeed there was an issue of capacity through that period. Is some of the data available there?

Dr CARNIE — The coroner’s office made available its data in terms of reportable deaths, and those increased numbers of reportable deaths are included in this total number of deaths that we have identified. It was a case of getting data from the coroner’s office and from the registry of births, deaths and marriages and making sure that there were no duplicates. Some of the reportable deaths that were reported to the coroner had obviously not gone through the registry at that time.

Mr DAVIS — So essentially we wait on that and we cannot use any data that may be forthcoming out of that at this stage?

Dr CARNIE — At this stage. That is right.

Prof. BROOK — I suppose you might draw some very limited conclusions. I am unable to find the exact figure, but I think there were 179 reportable deaths or excess reportable deaths; maybe it is a total. A death is reportable because it is a sudden or unexpected death for which a medical practitioner is not prepared to issue a certificate. It is reasonable to assume some form of surrogate for people who died unexpectedly, as it were, but it is not entirely clear because if somebody dies and is then taken to a hospital emergency department dead on arrival, they pretty much automatically will go to the coroner’s court. Even that is a difficult estimate. It is a reasonable assumption to say that there are a number of people who were not expected to die at that time.
Mr Davis — And the emergency departments did not do any of their own internal work on that?

Prof. Brook — Most people do not die in emergency departments. In these sorts of events most people actually die in the community. They might also die in long-term care facilities, but of course that is a part of life’s end. There were some reports about the capacity of particular — you know, most people were talking about this — short-term mortuary facilities. The Coroners Court has extensive capacity, as it demonstrated in the bushfire events. It can generate overload facilities very quickly.

The Chair — We have two follow-up questions — one from Mr Barber and one from Ms Broad.

Mr Barber — This has all been based around deaths. People present at emergency rooms with symptoms that can be diagnosed as heat stress. Has that been looked at at any stage?

Dr Carnie — That is part of the report. So we looked at emergency department presentations as part of the report —

Mr Barber — I did not realise that meant ‘present alive’. As you just said, people do not turn up dead?

Prof. Brook — Emergency department presentation usually means alive.

Dr Carnie — There was an increase, especially in those 75 years and older in relation to heat related presentations in emergency departments during that week, yes.

Mr Barber — Here is just a slightly different question. In Minister’s Neville’s press release of 23 November about the 23 new and 7 existing community registers receiving funding, she says:

They are run by community volunteers out of local police stations or other nearby locations including council offices, with local police support.

During a heatwave, registers can be used to check on the welfare of people prone to heat stress.

Will they be used in that way? Are you expecting, requiring or needing them to be used that way, or is it a matter of local policy and autonomy by people who run those registers as to what they do when there is a heatwave?

Prof. Brook — I think it has been made clear we are not prescriptive with local government as to how it tackles the issue of heatwaves and the response to individuals. We do, from health, see local government as the key interface for us. I made the point they are going to use a variety of sources for getting a handle on who in their community is vulnerable and who may need additional support. That would be one way that you would anticipate they would do that because those people are connected in at the local level. But, as I said, they will also use HACC.

Going back to your concerns about public housing, whether the knot has been tied between them and public housing is something we shall explore with the Department of Human Services. Those registers are multipurpose. As I understand it, they began as seniors registers and they have extended to become community registers.

Mr Barber — When I read your heatwave plan, will I read in there that they are a part that you yourselves could trigger, for example? In getting the message out by radio is one thing, but getting it out directly via these registers would be a more targeted response.

Prof. Brook — What we would do is communicate directly with local government. They would trigger that, because it is a local thing. If there is some easy communication system and if there is an assembly of websites or whatever to which we have access, that is a simple communication so they are aware that things are pending. By preference we would actually have the local government emergency management coordinator, or however they are titled, to actually do that as part of their heatwave preparedness plan.

Ms Broad — Briefly, in earlier evidence you made the observation that you believe that Victoria’s health system, particularly hospitals, coped very well with the increased number of presentations related to heat stress earlier in the year. Can you outline briefly for the committee in what way you believe they coped well and what that assessment is based on?
Prof. BROOK — The level of emergency preparedness of Victorian hospitals is, I am confident, very high. I think as I mentioned in earlier evidence, even compared with a few short years ago, there is no question we are at a much higher level of preparedness. This goes to various different elements.

Just briefly I began to talk briefly about infrastructure which is vitally important. I mentioned that all major hospitals have two major power inputs. But in addition to that they all have alternative generating capacity. Some of them in fact distribute power into the grid through gas cogeneration. All of them will have emergency generation capacity. Those who have, for example, intensive care units and supports will also have stored power backup. Stored power backup cannot last for a very long period.

Despite all of that you can still have system difficulties. It is not just a matter of assuming that those things work, it is a matter of continually testing that they work and making sure your placement of generator facilities, large diesel generators, is appropriate, that they have been tested and they do actually work when you press the ‘on’ button.

The advantage in power feeds is that with modern power shedding techniques, even if an area is blacked out, you can actually light up certain parts of an area. Do not ask me about switching technology. It is obviously more sophisticated than my electronic set when I was young. You can often protect major facilities through lighting up one or other of the power feeds. Obviously it is good to be on the same line as your local large hospital. There are a whole range of issues associated with modern design. We have to accept our hospital stock is of a variable age. It is a constant process of upgrading, mitigation and adaptation at work.

Ms BROAD — Just to interrupt, my question was actually about a retrospective assessment of how the system coped with this last period; it is general.

Prof. BROOK — Sorry, I will leave that discussion on infrastructure. We looked at how many people presented to emergency departments, what was the increase in admissions, was there stress in the system such that staff had to stop doing certain things in order to cope with them. The answer was no, they did not; they managed perfectly well throughout this period, because the stress for admission was relatively small.

The same, for very different reasons, was also true during bushfires. Regrettably, the 7 February events caused a lot of loss of life but not a continuing stream of morbidity. In terms of their capacity they coped perfectly well, but they had to deal with very significant infrastructure issues. For example, Western Hospital found itself for quite a period without adequate power; they had to rely on backup. What do we do in those circumstances? They, along with whoever can help them, get whatever is not working, working as quickly as possible.

Bendigo Health had a bit of a triple whammy on 30 January. Not only was its cogeneration plant out of action but the whole substation melted down — not its own substation but one at some distance — so it became totally reliant on emergency generator backup for a protracted period. Obviously that causes us concern, and when that happens one of our coordination functions is to look to see whether there is any need for relocation for vulnerable people.

Fortunately there was not; the hospitals were very well prepared. They all have extremely detailed plans. I have mentioned to you that this is not specifically for heatwave, it is for all hazards, all risks; and these all fit into what is called code brown. All of them this year are even better prepared because all of them have undertaken a very detailed and comprehensive self-assessment using an interactive web-based tool that gives them a rating. Admittedly, it is mostly used for bushfire purposes, but certainly it has every element of ‘How vulnerable are your clients, what is the size and scale of your facility, what plans do you have, if you had to relocate or evacuate people, how would you get them somewhere else and where would you put them?’. All of those things are very much part of what we have done.

We tend in these circumstances to get information relatively immediately. Throughout all of this we ran what is called VHEC, which for some obscure reason is the Victorian Health Emergency Coordination. I have often wondered what happened to the last word — the Victorian Health Emergency Coordination what? I think it means centre because that is certainly what it is. It is at 50 Lonsdale Street. What we then do is gather real-time information from hospitals about what they are actually facing and then daily census information about, for example, intensive care admissions, presentations to emergency departments, bed numbers.
As systems improve we are able to get that information simply through direct electronic means, but to date we have had to rely on information provided by people in different ward sectors of each of our major hospitals.

We have a very close engagement with hospitals when things go bad. We are not aloof. We are there day and night. As I said, our most important function is not just coordination — coordination can be terribly important — but it is authorising so that if people need to open things, if people need to do things for which they feel they do not have the requisite approval, they will get it if it is sensible.

The CHAIR — Thank you, Professor Brook and Dr Carnie. The committee appreciates your evidence this afternoon. You have taken a number of matters on notice and the secretariat will follow up on that in due course. You will have a draft version of the transcript sent to you for any corrections in the next couple of days. Thank you for your evidence this afternoon.

Committee adjourned.
Dear Mr Willis

Thank you for your letter dated 8 December 2009, in which you request information on matters taken on notice on 2 December 2009 during the evidence presented at the Standing Committee on Finance and Public Administration, inquiry into departmental and agency performance and operations, in relation to the department’s assessment of the January 2009 heatwave.

I will address each of the matters taken on notice and raised in your letter, in turn.


I have also included for your information copies of the poster Staying healthy in the heat and the brochure Heatwave: Important health information for summer (attachment 3). This information will be made available to members of the public through service providers including councils, doctors’ surgeries, pharmacies, community registers, community health centres, Seniors Information Line and Information Victoria. The publications are available in nine community languages and are also available on the department’s website <www.health.vic.gov.au/environment/heatwave/>.

In relation to your request for data on the possible responses and effects of the high temperatures experienced during November 2009, at this stage the data is incomplete. However, the activity for the medical locum service shows that while there was a higher number of call outs compared to the average for the period 5th to 8th November 2009 when the mean temperature began to increase, the heat related call outs were few in number. I am not able to comment on other sources of data at this stage.
Irrespective of cause, Victorian hospitals and health services have emergency management and business continuity plans to manage a variety of emergencies that may, or have the potential to, overwhelm their day-to-day functionality and infrastructure. This approach to incident management is reflective of and complementary to the ‘all hazards’ ethos adopted by Victorian emergency services agencies and relevant government departments.

In response to your request for details of general emergency planning in health infrastructure, I have included the document Hospital resilience: code brown policy framework (attachment 3), also available for download from <http://www.dhs.vic.gov.au/__data/assets/pdf_file/0008/316925/Code-Brown_web.pdf>. This document provides hospitals and health services with clear and consistent guidelines to inform their emergency management planning in a consistent manner.

In accordance with the ‘all hazards’ ethos, during times of emergency where the health sector is engaged, the Victorian Health Emergency Coordination (VHEC) function of the department is activated as a component of the broader whole-of-health response.

This was the case during the January heatwave emergency, with hospitals and health services being activated and engaged with demand placed upon the sector during this period. VHEC was concurrently activated to provide over-arching coordination to hospitals and health services throughout this period.

There was a variable demand during this period, with hospitals, health services and VHEC responding with a raft of measures including:

- Activation of surge management plans
- Deployment or re-deployment of clinical staff
- Non-essential staff stood down, making more power supply available throughout critical areas
- Deferral of non-urgent programs.

Various hospitals and health services experienced interruption to mains power supply during the January 2009 heatwave emergency, however, essential services and business continuity were not greatly impacted. The department has committed $6.545 million funding in 2009-10 for the Infrastructure Renewal Program to replace or add infrastructure to keep facilities fit for purpose through business continuity and addressing life safety. Examples of funded projects include the capacity of emergency power generators and fuel storage capacity to run generators or upgrade of switchboard capacity to safeguard communication.

As part of emergency planning, in response to a predicted or actual heatwave, hospitals and health services are advised to undertake a series of preparedness activities including the identification of vulnerable patients and checking of critical and redundancy systems including power to ensure that in the event of a power failure, day-to-day operational functionality is not impacted.

To ensure business continuity and life safety, Victorian public hospitals that require continuous power supply plan for emergency power generation capacity. In addition, the Emergency Management Branch and the power sector have a process to identify an agreed hierarchy of essential requirements that gives the most at risk facilities priority during planned power outages and power shedding.

Other internally funded programs for bed-based facilities including hospitals, aged care, mental health and drugs, children youth and families and disability services aim to ensure fire safety, an essential component of safety during periods of extreme heat.

The development of new facilities is based on design principles that aim to protect and enhance life, rather than the asset. They also seek to balance life safety, comfort, enhance quality of life and environmental requirements.
With respect to the information requested regarding the Housing and Community Building Branch of the Department of Human Services (referred to as the Office of Housing) monitoring of vulnerable residents, I wish to advise that I am unable to comment on another department’s program so have forwarded the request to the Public Housing and Community Building Branch, Department of Human Services for direct reply.

The funding referred to by Professor Brook to the home and community care (HACC) program was provided in grants to councils and other community based agencies to support the development of personal emergency plans. The HACC program provides a range of basic support services to frail older people and people with disabilities who are experiencing difficulties in managing daily tasks but who wish to continue living at home.

All HACC clients are, by definition, vulnerable to some extent in order to meet the eligibility criteria to receive service. Victoria has 262,509 clients in receipt of HACC services. Additional funding of $1.25 million was offered as a grant to each local government area based on the number of clients receiving HACC services. The funding is also being used to employ assessors to determine clients most at-risk during emergencies, including heatwaves.

I trust this information addresses the issues you have raised.

Yours sincerely,

[Signature]

Janet Laverick
Acting Executive Director
Wellbeing, Integrated Care & Ageing

Att
Department of Human Services

Secretary

- 4 MAR 2010

e1849668

Mr Richard Willis
Secretary
Council Committees
Legislative Council
Parliament House
EAST MELBOURNE 3002

Dear Mr Willis


I understand that your questions regarding the HACC program were responded to by correspondence of 4 January 2010 from Ms Janet Laverick, A/Executive Director Wellbeing, Integrated Care & Ageing, Department of Health.

In reference to your comments about the welfare of vulnerable public housing tenants during periods of extreme heat, I draw your attention to the Department of Human Services Housing and Community Building Division “Keeping in Touch” program.

The “Keeping in Touch” service is a free, confidential program, aimed at increasing our support for elderly public housing tenants. Under the program, a trained Customer Service Officer calls single tenants aged 75 years or over once a week to ensure they are safe and well. The weekly call takes place throughout the year on a day nominated by the tenant between 8am and 10am. If the call is unanswered an agreed emergency procedure is activated and help arranged if necessary. There are currently 1176 elderly tenants taking part in the weekly service. Tenants who have chosen to take up the regular weekly service were offered the option of a follow up in six months time. A total of 5002 tenants have asked for the six months contact option. To assist with managing tenant welfare on days of extreme heat, an alternative scripting is used on “code red days” when calling tenants. We advise of the impending heat and provide tips on keeping cool.

If you have any further questions about the “Keeping in Touch” program please contact Jenny Smith, Manager, Housing Call Centre on 03 5126 9201.

Yours sincerely

Gill Callister
Secretary
APPENDIX 5 – CORRESPONDENCE FROM BARWON FREEDOM FROM FLUORIDATION INC

Barwon Freedom from Fluoridation Inc.
BAFF

Mailing Address: PO Box 7024 GEELONG WEST VIC 3218
Email: baffgeelong@gmail.com Website: www.baff.org.au

David McRae BSc (Hons), Grad Dip Human Services
Vice-President, BAFF inc.

23 January 2010

Mr G. Rich-Phillips MLC
Chairman, Legislative Council Standing Committee on Finance and Public Administration
C/O Parliament House
Spring Street, Melbourne, 3001

Dear Mr Rich-Phillips & colleagues

I am one of a considerable group of citizens across Victorian regional cities that have become deeply concerned and aggrieved at the way the Victorian Government has been promoting, and then enforcing water fluoridation upon our communities. This project is led by Dr John Carnie, Chief Health Officer.

The aggrieved communities include much of Gippsland, Wodonga, Wangaratta, Horsham (2003-2006), Castlemaine, Warrnambool (2007-2008), Geelong, Ballarat (2009) and Mildura and Swan Hill currently. This is not to mention the considerable number of residents of Melbourne metropolitan who object that their health concerns are not addressed, nor is the community given any ongoing democratic say on the matter, as fluoridation continues year after year.

We are especially concerned that at a 1st December 2009 Public Hearing Examination meeting of the Legislative Council Standing Committee on Finance and Public Administration Dr Carnie was asked questions on water fluoridation. In his replies to the Members of Parliament in that committee he made some startling errors and extremely misleading statements. I submit that the extent of Dr Carnie’s misleading statements is serious and urgently requires redress.

On behalf of concerned citizens across the above mentioned cities and regions, I request that I be granted leave to assemble a small team of experts and community representatives to present accurate information, and a rebuttal of Dr Carnie’s claims to the Committee, at the very earliest available opportunity in 2010.

Unless you request it, in this letter I will not present the full details of the manner in which Dr Carnie’s comments were erroneous and misleading, rather using our presentation to the Committee to do that. But in brief, the following is a listing of his misleading statements, with a short summary of how he misled.
DR CARNIE: “The only scientific evidence that exists in terms of a theoretical deleterious effect is on dental fluorosis, and this happens at relatively high levels of fluoride in the water …”

MY COMMENT: The deleterious effect is not “theoretical”, it is well established in numerous Australian and international scientific papers and studies. Furthermore, it does not only occur at “high levels”, but at the level used in the Victorian government water fluoridation program, which is one milligram of fluoride per litre of water.

DR CARNIE: “There is no other scientific evidence of any other deleterious effects of fluoride at the levels used in public fluoridation programs in Australia.”

MY COMMENT: If Dr Carnie means there is no Australian evidence, that is purely a function of an utter absence of any scientific studies of the effect of water fluoridation upon Australian (or Victorian) subjects’ bones, nervous systems, thyroid glands or other tissues. The only Australian studies ever performed have been of teeth. This in itself is a disgrace, and would not be allowed for any other so-called therapeutic substance.

If Dr Carnie is referring to world wide evidence, he is quite wrong, and we propose to present a summary of that evidence of deleterious effects from USA, Europe and China, to the Committee.

DR CARNIE: “The osteosarcoma story began with a study from Harvard … and in fact there was a letter from the leading person in that study who said that it was quite premature to come to any conclusions …”

MY COMMENT: Dr Carnie’s willingness to mislead here is breathtaking. He fails to mention that the “leading person” was in fact Prof. Chester-Douglass, at Harvard, and since his Letter to The Editor in 2006, two things have occurred. First, the commercially compromised position of Chester-Douglass has been highlighted, with him being in the employ of the Colgate Corporation, which makes considerable profit from fluoride products, and could not tolerate any publicity that fluoride, in any form, could be causing harm.

Second, Dr Carnie relies upon the fact that in that letter Chester-Douglass claimed he would “soon” present the full results of that study, which would show that fluoridated water is NOT causing osteosarcoma (bone cancer) in young men and boys. That was in 2006; has Chester-Douglass done any such thing? NO. Chester-Douglass is now in retirement; he never published a word of what he promised he would. So Dr Carnie’s claim is hollow. His “leading person” is a straw man who produced nothing. The strongest science on the question of fluoride & osteosarcoma is still the work of Dr Bassin and colleagues at Harvard (2006), the work which Chester-Douglass, and now Dr Carnie, try to downplay. Dr Bassin’s work showed a strong correlation between consumption of fluoridated water by boys, and their subsequent development of osteosarcoma. Osteosarcoma is an uncommon, but frequently fatal cancer.

Dr Bassin and team were scientific enough to state that “more work needs to be done on this link”, as any good scientist would. It does Carnie and the Victorian DHS no credit that he believes a single Letter to the Editor, by someone else involved in the project (now discredited), is sufficient science to claim that the Victorian public is completely safe in their constant consumption of fluoride (fluorosilicic acid).

DR CARNIE: “We have in fact looked at osteosarcoma rates in Victoria versus Queensland over the past 25 years. … absolutely no difference …”
MY COMMENT: Dr Carnie fails to mention that he looked at rates in a different age group to the Bassin study, and his survey just that, ‘a survey’, and not a properly controlled, rigorous scientific study, like that of Dr Bassin and colleagues. Dr Carnie’s “we looked at t...” has of course not been published in any medical or scientific journal, as it is not scientific work!

FINALLY, since the topic of this Committee hearing was ‘heatwave conditions’, the fluoride matter is very relevant. There is strong evidence that one of the symptoms of fluoride intolerance, for those who suffer this condition, is increased thirst. In heatwave conditions Dr Carnie gives advice to drink a lot of water. But why is Dr Carnie not warning those who find that drinking more water fails to quench their thirst, and in fact makes them more thirsty, that they may have to avoid the fluoridated tap water?

There is a great deal more that could be said, and I am hopeful that the Committee will give us the opportunity to present balancing evidence on this matter for the public record.

Yours sincerely

David McRae, Vice-President

PS. I will be out of Victoria for the period Jan 27 to Feb 18, however I will be very contactable on my email address djmrcae@ncable.net.au for organizing our presentation. Alternatively, the above PO Box will be cleared regularly.

Cc. Richard Willis, Secretary