NEW SOUTH WALES STATE CORONER'S COURT

Jurisdiction:	**Coronial**
Name of Deceased:	**Jinesh DANI**
File Number:	**1082 / 2002**
Hearing Dates:	**15-19 February, 16 March and 10-11 June 2010**
Location of Inquest:	**State Coroners' Court, Glebe NSW**
Date of Finding:	**28 July 2011**
Coroner:	**Deputy State Coroner, Magistrate P A Mac Mahon**
Representations:	**Ms P Lowson - Counsel Assisting with Ms M Rizzo** **Mr A Hewett SC - Premier Pools** **Ms P McDonald – Workcover Authority** **Mr J Stewart – Owners Corporation Strata Plan 56117** **Ms A Duvall – Commissioner of Police** **Ms V Thomas – Jemena Asset Management and Jemina Gas Networks Ltd**

Mr A Emery – Bright & Duggan Pty Ltd

Mr G Barry – Sydney City Council

Mr P O'Brien – Sentinel Security Group Pty Ltd

Finding made in accordance with Section 81(1), Coroners Act 2009:

Janesh Dani (born 23 August 1972) died on 27 June 2002 in the gymnasium at 1-5 Harwood Street, Pyrmont. The cause of his death was carbon monoxide poisoning. The source of the carbon monoxide was a gas pool heater that had been enclosed resulting in the carbon monoxide gas travelling through a gap in the wall in the vicinity of the enclosure and the spa pool area into the ceiling void above the spa pool and from there into the spa pool and the gymnasium area of the building.

Recommendations made in accordance with Section 82, Coroners Act 2009:

To: The Minister for Fair Trading

That consideration be given to the implementation of a communication campaign directed to building managers, strata managers and owners corporations advising them of the need to:

1. Identify the presence of gas heaters, including gas heaters installed for the purpose of heating swimming pools or spa pools, and
2. To maintain such heaters so as to ensure that at all times adequate ventilation is maintained and the removal of anything that might affect the adequacy of such ventilation.

That a community campaign be undertaken before each winter season to remind consumers of the potential dangers associated with gas heaters and the need to maintain, monitor and ensure adequate ventilation of gas heaters whether installed internally or externally.

Introduction

Janish Dani was born on 23 August 1972 in India. He arrived in Australia in about 1998. He lived with his sister, her husband and a friend at Westmead. He was undertaking a Business Studies Degree and at the same time working. In 2002 he returned to India and married Vasha Dani. On his return to Australia his wife remained in India. She was to join him when her visa to come to Australia was approved.

Mr Dani was employed by Vinconic Pty Ltd to perform security guard services. Vinconic was subcontracted by Sentinel Security Group to supply security guards to work at various locations. One of the locations was at an apartment complex called the “Harbours Edge Apartments” (the Premises), which was located at 1-5 Harwood Street Pyrmont.

Mr Dani was employed to perform security duties on an overnight shift. He commenced work at 6pm and his shift concluded at 6am the next day. Mr Dani was based at the reception desk of the premises but conducted regular patrols inside and outside the building. Those patrols included the roof terrace, stairwells, and basement car park, gymnasium and spa pool.

On 26 June 2002 Mr Dani commenced his shift as usual at about 6pm.

About 12noon on 27 June 2002 a resident of the apartments, Mr Rowna Grosser, observed Mr Dani lying on the floor of the gymnasium. Mr

Grosser checked on his welfare and found that Mr Dani was deceased. Police and ambulance were called.

An autopsy conducted by Dr Paull Botterill subsequently found that the cause of Mr Dani's death was carbon monoxide (CO) poisoning. He was found to have a CO blood concentration of sixty six percent (66%), which was well into the fatal range.

Jurisdiction and function of the Coroner

Section 81(1), Coroners Act 2009 (the Act) sets out the primary function of the Coroner. That section provides, in summary, that at the conclusion of an Inquest the coroner is required to establish, should sufficient evidence be available, the fact that a person has died, the identity of that person, the date and place of their death and the cause and manner thereof.

Section 82 of the Act provides that a coroner conducting an inquest may also make such recommendations, as he or she considers necessary or desirable, in relation to any matter connected with the death with which the inquest is concerned. The making of recommendations are discretionary and relate usually, but not necessarily only, to matters of public health, public safety or the conduct of services provided by public instrumentalities. In this way coronial proceedings can be forward looking, aiming to prevent future deaths. It is not the role of the coroner to attribute blame.

Identity, Date and Place and Cause of Death

On the evidence available Mr Dani's identity, the date and place of his death and the direct cause thereof were not controversial.

Chris Pavlis, a director of the Sentinel Security Group, with whom Mr Dani had worked for some years, identified his body at the gymnasium on 27 June 2002. I accept the evidence of Mr Pavlis' as to identification.

Mr Dani's body was the subject of a post mortem examination on 28 June 2002. Dr Paull Botterill, a forensic pathologist, conducted that examination. Dr Botterill found that the cause of Mr Dani's death was (CO) poisoning. I accept the opinion of Dr Botterill as to cause of death.

The evidence was that Mr Dani commenced work at the premises at about 6pm on 26 June 2002. He spoke to his friend Vickram Patel by phone at 12.57am on 27 June 2002 and during the course of that conversation they discussed football match in which they were both interested. At 2.18am Mr Dani appears to have made an entry in the security log to the effect that he was *"checking the car park area."* At 2.19am, 2.32am, 3.03am and 3.09am the building's security cameras record a person, who appears to be Mr Dani, in the gymnasium. At about 12 noon that day Mr Dani was found deceased in the gymnasium.

I am satisfied, on the basis of the evidence available, that Mr Dani died in the gymnasium of the premises and that he died sometime in the early hours of the morning of 27 June 2002.

Manner of Death

The issue that was more complex, and the subject of detailed investigation by the investigating police, was to determine the manner of Mr Dani's death. This involved and attempt to discover how Mr Dani came to die as a result of CO poisoning and what was the source of the CO.

CO is a clear, colourless, and insidious poison that is responsible for many inadvertent and preventable deaths each year. The major environmental source of carbon monoxide is the incomplete combustion of carbonaceous fossil fuels. All cases of fatal CO poisoning are said to be readily preventable. In addition to motor vehicle exhaust other lethal sources of CO are often related to home heating systems. Blockages of flue's or other inappropriate repair work on home heating sources or ducts are often responsible for CO toxicity. The uptake of CO increases as respiratory rates increase (as would occur if a person were working out in a gym) and some of the typical symptoms of CO toxicity are headaches, weakness and listlessness.[1]

Having regard the physical circumstances surrounding Mr Dani's death, it was apparent that there were only two possible sources by which CO could have entered the gymnasium in which Mr Dani was found deceased. Those were exhaust from motor vehicles using the basement car park and a gas heater that was used to heat the water in the pool spa that was located on the premises. Both the basement car park and the pool spa were adjacent to the gymnasium in which Mr Dani' body was located.

[1] Goldstein, Bernard D. *Carbon Monoxide*, Encyclopedia of Public Health 2002

Investigators found no reason to suspect that motor vehicle exhaust from the car park was the source of the CO. There was no process identified by which such exhaust as was produced by motor vehicles could enter the gymnasium. In addition although an examination of the water heater found that it had not been burning efficiently, thus producing CO, there was initially no apparent connection between the heater and the gymnasium.

By coincidence on 28 June 2002, the day after Mr Dani's death and without knowledge of his death, Robert Lowden, a gas plumber attended the premises and replaced a faulty ignition module and a worn igniter assembly of the heater. Upon leaving the building Mr Lowden spoke to the building manager Nancy Cabrera and advised her that in his opinion the site in which the heater was located was not compliant with gas safety requirements. He recorded on the invoice he prepared for the work undertaken:

> *"Note: - Advised Nancy that the roof which has been installed above the heater does not comply with Gas regulations and should be removed."*

This observation provided the clue that directed the later police investigation.

The Premises were constructed in about 1997. It was a strata development of 11 floors of residential units, a multi storey car park, indoor spa pool and gymnasium. Neeta Corporation Pty Ltd, a member of the Meriton Group, was the developer.

Premier Pools Pty Ltd constructed the spa pool. The contract entered into by that company did not, however, extend to the installation of the electrical and gas components associated with the use of the spa pool.

The installation of the gas heater was sub-contracted to Luke Stapleton of Luke Stapleton Plumbing. Mr Stapleton was a licensed gas plumber. Mr Stapleton gave evidence at the inquest. He agreed that he had had installed and commissioned the Hurlcon Gas heater. He said that having installed the heater he had shut down the pool filter, adjusted the gas burner pressure and then arranged for the installation to be inspected by a gas inspector. His evidence was that the installation was undertaken in accordance with the then applicable regulations and that the gas inspector who inspected the installation confirmed this.

In 1997 the applicable regulation was the AGA Installation Code 601. Australian Standard 5601 (AS 5601) replaced this in 2000. The Australian Standard was subsequently varied in 2002 and 2004.

At the time of construction of the premises in 1997 gas was supplied by subsidiaries of the company now known as Jemena Limited. The ownership of the gas network and the management of that network and the names of the corporations responsible have changed from time to time since 1997 however at the time of inquest the network was owned by Jemena Gas Networks (NSW) Limited and the network was managed by Jemena Asset Management Pty Ltd. The corporate arrangements are not of significance to the matters that I have to determine and I propose to refer to these entities and their predecessors as Jemena.

Initially Jemena, which was granted leave to appear at the Inquest, did not accept that gas inspectors approved installations as Mr Stapleton asserted. Peter Bowden, General Manager, Gas Planning and Development, said in his statement that:

> *"In New South Wales, Jemena's involvement in the gas industry is limited to ownership and management of gas infrastructure assets, including the Network. It does not conduct energy retail business, nor does it provide any gas fitting services direct to customers. This was also the case in 1997."*

There was thus a contest as to whether or not Jemena, through its employees or agents, had confirmed that the installation of the gas heater had been undertaken in 1997 in accordance with the then current regulations.

Further investigation on the part of Jemena during the course of the Inquest led it to accept that in about 1997, whilst it was not the ordinary activity of gas inspectors to approve installations, inspectors did do so in some cases and that it might have been the case in respect of the premises. I accept the evidence of Mr Stapleton and am satisfied that the installation of the gas heater was undertaken in accordance with the then applicable requirements and that this was subsequently confirmed when, following the completion of the work, a gas inspector inspected the installation.

Hurlcon Pty Ltd supplied the pool heater. It was one that was intended for outdoor use but could be converted for indoor use by the installation of a flue.

The pool heater was installed in a three-walled enclosure. The original building plans did not include the gas heater enclosure. This was added by an amendment to the original plans.

The gas heater enclosure consisted of a wall parallel to the footpath on Bridge Road, Pyrmont, in which was located a metal louvered ventilation window. The second wall ran between the Bridge Road wall and the garden area of what is now a restaurant located adjacent to the premises. The third wall is one side of a vestibule of the premises and has the door into the gas heater enclosure.

At the time of Mr Dani's death the access door was a solid door. The plans for the building indicate that the relevant door was to be a metal louvered door. There was some evidence that the louvered door was in fact installed and later changed to a solid door. It was not able to be determined when the change was made however it would appear that it occurred at an early date in the life of the building. I am satisfied that the change occurred well before 2002.

The evidence at inquest was that pool heaters in similar buildings, for the most part, were located in a utility room within the buildings however to do so was not obligatory. The placing of the heater in an external location was appropriate so long as the location was one that allowed sufficient ventilation. I accept that this was the case.

As I indicated above I accept the evidence of Mr Stapleton that when he installed the gas pool heather he did so in accordance with the then relevant regulations. I accept that the relevant gas inspector confirmed

that the installation was compliant following the completion of Mr Stapleton's work.

There was, in fact, no evidence to suggest that the installation of the gas water heater in 1997 was not undertaken in accordance with the then applicable regulations. I am satisfied that it was.

As mentioned above, a gas heater designed for external installation such as the Hurlcon , can be converted for internal use. In this case there was no evidence to suggest that the heater was converted for in-door use prior to 27 June 2002. I am satisfied that it was not.

If the gas pool eater was installed in 1997 in accordance with the relevant regulations, and therefore considered safe to operate, how was it that it could have been the source of the CO that caused the death of Mr Dani? This issue was the subject of a number of studies commissioned in preparation for the inquest.

Workcover NSW (the Authority) commenced an investigation of Mr Dani's death in late 2003. Officers visited the site on a number of occasions. Mr Phill Cantrell, Senior Project Officer in the OHS Medicine Unit of the Hazard Management Group of the Authority undertook a review of the information available and prepared a summary that included the following:

> *"There are 2 possible sources of the CO that could have infiltrated the gym, one was the apartment car park next to the gym, the second was the pool heated that was external to the gym in an enclosure on Pyrmont Bridge Rd. The car park scenario is very doubtful as at this early hour little activity in a well-ventilated car park would be envisaged and the other noxious gases that are associated with car exhaust fumes (oxides of nitrogen, sulphurous*

compounds and aldehydes) would warn anyone in the gym that they were being exposed. The more likely scenario would be carbon monoxide from the pool gas heater being drawn into the gym by the gym's ventilation system. Carbon monoxide gas derived from this source would be free of other warning combustion products. Initially, this seems unlikely as the heater is situated in a small enclosure outside the gym on Pyrmont Bridge Road. However there is a possible route for the exhaust gases from the heater to enter the gym via an inlet vent above the access door that leads from the pool area onto the road beside the heater enclosure. This inlet supplies air to the gym and pool areas."

Mr Cantrell outlined a scenario in which the CO could travel from the heater to the gym given certain atmospheric conditions and concluded his summary with a recommendation that:

"Extensive investigations into this incident be carried out immediately by a competent authority for the conditions that killed Mr Dani I believe still exist and another fatality could occur at any time given similar atmospheric conditions".

*O*n 6 October 2004 Inspector Gordon Tuckley undertook a review of the information available to the Authority and on 6 October 2004 concluded that:

"The most likely scenario for the source of the carbon monoxide was the gas pool heater."

He recommended that:

"Pending the result of the Coroners findings this investigation be suspended."

No further investigation by either the police or the Authority appear to have been undertaken for some time thereafter.

In July 2006 the State Coroner allocated the matter to me for inquest. I asked the Coronial Investigation Team of the NSW State Crime

Command to take carriage of the investigation into the death of Mr Dani. Senior Constable Shane Wood was then appointed as officer in charge of the investigation.

Senior Constable Wood prepared a coronial brief of evidence that allowed the matter to be brought to inquest. The investigation that was undertaken by Senior Constable Wood was an impressive one in that it was able to resolve a number of matters of complexity.

In 2007, in a collaborative effort between the Authority and the Office of the State Coroner, Testsafe Australia (Testsafe), which is a commercial testing, research and expert witness facility owned by the Authority, was asked to provide an expert opinion.

Testsafe was asked to:

- Identify potential sources of carbon monoxide in the vicinity of the gymnasium,
- Identify potential carbon monoxide pathways into the gymnasium, and to
- Review witness statements relevant to production and distribution of carbon monoxide.

Mr Daniel Massey, a fire and explosion scientist, and Mr Robert David Pearson, the manager of the Fire and Explosion Branch of Testsafe prepared the opinion.

Massey and Pearson concluded their report dated 11 June 2008 saying that:

"Two potential sources of carbon monoxide were identified in the vicinity of the gymnasium. The car park has only one pathway for gas to reach the gymnasium, through the relief ducting. A site visit and close examination of the pool heater enclosure, the ventilation system and the suspended ceiling above the pool revealed a series of gaps in the walls and ceilings that could allow exhaust fumes from the external heater to travel through the building. There also appears to be a mechanism whereby heater exhaust can exit the enclosure's vent and be drawn towards the intake for the ventilation system supplying air to the pool and gymnasium areas. In association with witness statements, this information allowed three possible pathways to be established between the pool heater and the gymnasium.

These pathways are factually reported as continuous airspaces capable of gas exchange. No conclusion is made regarding the direction and flow rate of gases through these pathways, or the relative likelihood of the pathways carrying carbon monoxide on the day of death."

Following the receipt of the Testsafe report the investigation of Mr Dani's death was little advanced. The two sources of CO initially identified were confirmed. The likelihood of the source being the pool heater was also confirmed and the possible pathways for the transmission of CO had also been identified. Whether or not the source was in fact the pool heater had, however, not been confirmed.

This also raised the additional question that if the heater was in fact the source why was it that the problem only emerged in 2002 when the building had been constructed 1997?

To try and answer this question a further expert investigation and opinion was commissioned by the NSW Police from Aecom. The goal of this study was to try and estimate the possible levels of CO concentration within the gymnasium under different scenarios. The amount of CO that could be drawn into the gymnasium over a period of

time was estimated using Computational Fluid Dynamics (SFD) modelling.

The Aecom report was received in June 2009 and as a result of the studies undertaken, and based on the assumptions that they used, it was concluded that lethal levels of CO could be reached within the gymnasium within a realistic time frame.

This conclusion was based on the proviso's that:

- The heater was operating at the time of death,
- High CO concentration were generated by the heater, and that
- The pool and gymnasium mechanical ventilation system was not operating.

They were also able to provide an opinion as to the route by which the CO travelled between the heater and the gymnasium.

A factual examination of the ductwork on the site by Senior Constable Wood resulted in the observation that the ductwork had begun to fail and that there were numerous flaws in that part which connected the various areas surrounding the pool and gymnasium. As a consequence in 2010 Aecom was asked to consider the additional scenario of the mechanical ventilation system operating but the integrity of the flexible ductwork being compromised by the wear and tear that would be experienced by its use in an environment of high humidity and pool chemical gases.

On 10 February 2010 Aecom provided a further report in which it concluded:

"That a feasible situation would have arisen in which lethal levels of CO will be present in the pool room and the gymnasium when:

(i) The boiler was operating for a sufficient period of time prior to the time of the incident, and
(ii) High CO concentrations were generated by the boiler,
(iii) The mechanical ventilation fan was operating, and
(iv) The flexible ductwork integrity was compromised with holes."

A theoretical basis had now been established that could account for the source of the CO that resulted in the death of Mr Dani. The question was thus whether or not I could be satisfied to the relevant standard of proof that Mr Dani died as a result of CO poisoning that came from the external pool heater. I am satisfied that I am able to do so.

I am satisfied I that it is more likely than not that at the relevant time the mechanical ventilation fan was operating. This is a building wide system. Numerous occupants of the building would have noticed its failure. There is no evidence that this had occurred. I am satisfied that it did not.

I am also satisfied that it is likely that the ducting material used in the mechanical ventilation system had been compromised. The material used in the ducting was of a nature that made it susceptible to failure due to it being in an area of high humidity and exposed to pool chemicals. It is likely that after some five years of use such failures would be likely to have emerged resulting in holes in the ducting that would allow the escape of CO into the surrounding areas.

The primary finding of fact that must be able to be made to support that conclusion is that the heater was operating for a sufficient period of time

so as to allow the production of high concentrations of CO that could then be transferred to the pool and gymnasium areas.

The evidence was that the high concentration of CO in the area of the heater occurred primarily as a consequence of the roof over the heater enclosure. That roof, although not completely sealing the enclosure, resulted in the accumulation of CO that would then seek the easiest escape route from the enclosure. The examination of the building wall showed space existed through which the gas could enter the building. In the right atmospheric circumstances that route would be through that space into the building and subsequently into the pool and gymnasium.

During the course of the police investigation it was discovered that on 24June 2002, just three days before the death of Mr Dani, a security guard undertaking his rounds of the premises found a resident of the premises, Ms Jayanthi Ramadass, in the gymnasium unconscious. Ms Ramadass was removed from the gymnasium and subsequently taken by ambulance to Sydney Hospital where she was observed for a number of hours. Ms Ramadass was a person who was otherwise in good health and appeared to rapidly regain consciousness once she was removed from the gymnasium.

Ms Ramadass described her experience in the following terms:

> *"I returned home from a movie and dinner at pizza hut at 8.45pm (after my exams) from the city centre; and went down to the gym at 9.15 pm. I got on the stair climber/cross trainer machine and started to exercise, but within 15 minutes started to feel extremely dizzy and faint, unable to breath and attempted to slow down my workout because I thought I was a bit tired and pushed myself too hard. I went to the washroom to wash my face and get some cold water and air and tried to come back into the gym to continue my*

workout. But within 5 mins of doing so, I am started to feel really sick again, this time it was worse, could not breath any more, I was beginning to feel like I would faint and so I proceeded to pick up my belongings … the condition worsened. Somewhere between the corridor that lead to the exit door into the car park to the lift area, I felt myself blackout and faint just dropping all things I was carrying onto the floor as I collapsed. That's the last coherent memory before I remember being carried out by the security guard."

What caused Ms Ramadass to lose consciousness in the gymnasium on 24 June 2002? She was an otherwise healthy 25 year-old who quickly recovered consciousness when removed from the gymnasium. Her medical examination was unable to establish the cause of her losing consciousness. No toxicological examination of her was undertaken. CO is an insidious gas. It is odourless and the uptake of CO increases as respiratory rates increase (as would occur if a person were working out in a gym) and some of the typical symptoms of CO toxicity are headaches, weakness and listlessness. The evidence was that if CO poisoning were not fatal a person who is exposed to CO would quickly recover from the effects once removed from the source of the poisoning. I am satisfied that Ms Ramadass's experience on 24 June 2002 was the result of her having been the victim of CO poisoning.

I am satisfied that on the night of 26-27 June 2002 the atmospheric conditions existed that resulted in the accumulation of CO in the gymnasium and the subsequent death of Mr Dani. In coming to this conclusion I have had regard to:

- Mr Dani died in the gymnasium from CO poisoning. It was necessary for the CO to have entered the gymnasium from an external source and that source was more likely than not to have been the pool heater,

- The evidence was that the pool heater did not burn gas efficiently. This resulted in the need to have it serviced the next day. Inefficient burning of gas results in the production of CO,
- The physical circumstances of the pool heater enclosure, the three sides and the semi enclosed roof were such that CO could be trapped in the enclosed area and would need to escape by the route of least resistance,
- The space in the external wall above the pool heater and the compromise to the material comprising the ducting of the mechanical ventilation system allowed gas access to the gymnasium from the area in which the pool heater was located,
- The Aecom investigation showed that such a transference of gas into the gymnasium was theoretically possible, and
- The collapse into unconsciousness of Jayanthi Ramadass on 24 June 2002 suggests that CO had been entering the gymnasium for some time prior to the date of Mr Dani's death.

The above analysis shows that there were three factors that contributed to the circumstances of Mr Dani's death the absence of any one of which would have prevented his death. Those factors were:

1. The space in the external wall that allowed gas to enter the premises and in particular the mechanical ventilation system,
2. The nature of the flexible ducting material used for the mechanical ventilation system that became compromised over time by the wear and tear that it experienced by its use in an environment of high humidity and pool chemical gases, and
3. The construction of the roof over the pool heater enclosure.

The examination of the space in the wall appeared to have been in existence since the premises were constructed. Whilst to the uninitiated the wall appeared to be an external wall and it was thought to be strange that an external wall would have space therein that could allow the entrance of gasses. The initial impression was, however, following further investigation found to be incorrect. The evidence given to the inquest was that because of its location the wall was in fact an internal wall and the nature of the construction, whilst if not questionable at least unusual, was not in breach of any building requirements. I accept that evidence.

The material used for the ductwork was also examined during the course of the investigation. There were two types of material that might be used to construct the ducting of a mechanical ventilation system. The material used at the premises was a flexible one as an alternative to a rigid material. The evidence before the inquest was that either system was appropriate however the use of flexible material was both cheaper and at the same time was easier to use in the construction phase. The propensity of the material to become compromised over time due to environmental factors as I have found occurred in this case does not mean that the decision to use the material during the construction was inappropriate but was simply a matter for the Owners Corporation to deal with as part of its ongoing maintenance of the premises. I accept that evidence.

The construction of the roof over the pool heater was not, however, a part of the original construction of the premises. It was difficult to determine from the evidence precisely when the roof over the enclosure

was constructed however I am satisfied that it was not built at the time the premises were constructed.

Senior Constable Wood undertook a detailed investigation of the operation of the pool heater at the premises. His investigation found that the heater had been serviced by Robert Lowden, a gas plumber, who attended the site on 26 April 2001 and then again on 28 June 2002. Mr Lowden became involved with the heater at the request of Mark White who was contracted to maintain the pool. Mr Lowden was initially asked to assist because the heater had stopped working. He repaired the heater at the time of his first visit on 26 April 2001.

On Mr Lowden's subsequent visit, 28 June 2002 the day after Mr Dani's death, he made the record that I have previously referred to in which he recommended that the roof of the enclosure be removed because it did not comply with the gas safety requirements. Mr Lowden said that this was the case because:

> *"The pool heater is and outdoor pool heater and if they are enclosed in a structure and the structure has a roof then the structure should have three open sides. The gas regulations specify this requirement is found under the Australian Gas Association AG601"*

Mr Lowden initially attended the site on 26 April 2001. In his evidence he recalled that the enclosure was one that would allow enough room for one person to be inside. He stated that did not recall seeing a roof over the heater enclosure at that time.

Mr Lowden was an experienced gas plumber. He had been qualified for some 29 years. He had undertaken his trade training in Scotland and

had worked there for some 10 years before coming to Australia. From his experience in Scotland, where many heaters are inside, he was very conscious of the need for adequate ventilation. That is no doubt why he raised the issue in respect of the ventilation of this heater on 28 June 2002.

It would be strange that Mr Lowden, with his consciousness of the need for ventilation, would raise his concern about the roof on 28 June 2002 but not on 26 April 2001if the roof was then in existence. I think that it is more likely that the roof was not installed until after 26 April 2001. I am satisfied that the roof over the enclosure was installed in the period between 26 April 2001 and 27June 2002.

The investigation sought to identify the person that authorised the construction of the roof, who undertook the work and why it was constructed. Because of the lapse of time and the absence of relevant documentation this was a difficult task.

As already indicated the premises were constructed in about 1997. Being a strata development it was initially managed by the developer however once the initial period had expired it was under the control of an Owners Corporation. The Owners Corporation appointed a Strata Manager in accordance with the relevant legislation to act on behalf of the Owners Corporation. There was also a building manager who had purchased such rights from the developer. The Strata Manager at the relevant time was Bright and Duggan, the building manager was Nancy Cabrera and the Treasurer of the Owners Corporation was Valerie Storer.

Work undertaken at the common property of the premises would ordinarily be requested by the Owners Corporation through its Chairperson, the building manager or strata manager and paid for by the strata manager from the funds of the Owners Corporation. This process was, however, subject to the obligation of the builder and or the developer to make good defects in the common property or the residences of the individual owners.

The police investigation was unable to locate any documentary evidence relating to the construction of the roof over the pool heater.

Mrs Cabera and Ms Storer each gave evidence at the inquest. In short neither was able to assist as to the circumstances of the construction of the roof. Mrs Cabera denied arranging for the roof to be constructed and Ms Storer denied authorising its construction. They each agreed, however, that there had been a problem with leaves in the area of the pool heater that resulted in flooding when it rained and that the roof would have assisted in overcoming that problem.

Mr Joseph Cabrera also gave evidence. Mr Cabrera is the husband of Nancy Cabrera and was also employed by the Strata Plan. He undertook cleaning duties within the premises. His evidence was equally unhelpful in determining the circumstances of the construction of the roof.

The roof was removed and replaced by Michael Moddel with a mesh cover on 22 July 2002 following a request by Mrs Cabrera. Mr Moddel in his evidence denied that he constructed the roof. His evidence was that

he had not worked at the premises prior to July 2002. The documentary evidence available supports this contention. I accept that Mr Moddel did not construct the roof.

As mentioned previously the premises were subject to warranties and other obligations on the part of the builder and developer. The premises were constructed under the auspices of the Meriton Group. Tony Juric was the maintenance manager for the Group during the relevant period.

Mr Juric gave evidence at the inquest. He said that he performed warranty work at the premises on behalf of Meriton between 2000 and March 2002. Mr Juric also conducted a private building maintenance business. In addition to the work he performed at the premises on behalf of Meriton he also performed work for individual unit holders and the Owners Corporation. He would bill the party requesting the work through his private maintenance business.

In his evidence Mr Juric stated that he did not go to the area of the pool heater enclosure although he was aware of the existence of the enclosure. He stated that no one asked him to construct a roof over the enclosure and he did not do so. The investigation was unable to identify any records to suggest that Mr Juric had constructed the roof either under the warranty obligations or as a private job.

Nancy Cabrera and Valerie Storer gave evidence to the inquest that there was a problem with leaves in the vicinity of the pool heater. The leaves blocked the drains in the area and this resulted in some flooding. It seems reasonable to infer that the roof was constructed in order to overcome the problem with the leaves. Mr Moddel’s evidence was that

the roof was professionally constructed using tools, a Ramset Gun, that would not ordinarily be available to a “home” builder. Mr Juric was a professional builder that worked at the premises during the relevant time. Mr Jurich however denied constructing the roof and Mrs Cabrera and Ms Storer, notwithstanding their knowledge of the leaf and flooding problem, had no memory of how it came to be constructed, who undertook the work and how it was paid for. This is a somewhat surprising situation.

The records held by Bright & Duggan, the Strata Manager, do not show that the construction was approved, or paid for, by the Owners Corporation and as such were equally unhelpful in this regard.

Elizabeth Sleiman was the strata manager employed by Bright and Duggan to manage the premises during the relevant period. Her evidence was that she did not recall using Michael Moddell to undertake building work on any of her buildings. This was perhaps unsurprising as the evidence suggests that he only undertook a few jobs in July 2002. Ms Sleiman did however remember Tony Juric.

Ms Sleiman’s evidence was that Mr Juric was regularly used to undertake work in the premises and other buildings that she managed. She recalled that Mr Juric worked for both Meriton and for himself. She said that if the work that was undertaken was Meriton rectification work or Meriton responsibility then the payment for the work was a matter between him and Meriton.

If the work were not a Meriton responsibility then Mr Juric would either invoice using his private business or not invoice at all treating it as “good

will". Ms Sleiman recalled that Mr Juric *"would often perform 'good will work' at other buildings I managed."* She thought that: "*Tony would classify some of the work as being 'Meriton,' or under the authorisation of Meriton, he would just do the work."*

Notwithstanding his denial of having done it would be easy to conclude that Mr Juric constructed the roof over the pool heater enclosure. One might come to that conclusion because Mr Juric was the only professional building maintenance person that was known to undertake work on the site in the relevant period, the work was performed by a professional tradesman, the work was undertaken to resolve a flooding problem that occurred in the area of the pool heater enclosure, there is no evidence of any payment being made for the work to be undertaken and Mr Juric had a reputation of undertaking "good will work" in the various buildings in which he worked. Solving a problem that the building was experiencing was just the sort of "good will work" that a helpful and cooperative person such as Mr Juric could easily perform.

I am however unable to be satisfied to the requisite level of proof that this was in fact the case. The evidence at the inquest was that in constructing the roof a Ramset Gun was used. To possess and use such a tool it is necessary for the user to be licensed by the Authority. Mr Juric denied that he had a Ramset Gun at the relevant time and said that he had not used such a tool for over twenty years. A search of the records of the Authority shows that they have no records to show that Mr Juric has ever held a licence for a Ramset Gun. There is also no evidence to show that at the relevant time Mr Juric had access to the tool that was used in the construction of the roof and as such whilst I hold a strong

suspicion that he did I cannot be satisfied to the relevant standard of proof that he undertook the work.

Notwithstanding the investigation has been unable to identify who undertook the work to install a roof over the pool heater enclosure I am satisfied that the roof was constructed for or at the behest of the Owners Corporation to solve the problem caused by the leaves that fell into the pool heater enclosure. I am also satisfied that notwithstanding her denial such work could not have been undertaken without the knowledge of the building manager Mrs Cabrera. It is also likely that notwithstanding her lack of memory Ms Storer also participated in or was aware of the decision to build the roof. This decision to construct the roof was the most significant contributing factor to the events that led to the death of Mr Dani.

Section 82 Recommendations.

As I preciously mentioned Section 82 of the Act provides that a coroner conducting an inquest may also make such recommendations, as he or she considers necessary or desirable, in relation to any matter connected with the death with which the inquest is concerned. A number of matters arose during the course of the inquest that resulted in the need for consideration to be given to the making of recommendations in accordance with the section.

These matters related to:

- The police investigation of the death of Mr Dani.
- The management and maintenance of strata developments, and
- The dangers of carbon monoxide produced by domestic heaters.

The Police Investigation:

There were a number of problematic aspects of the initial police investigation that came to light during the investigation undertaken by Senior Constable Wood.

Mr Dani died on 27 June 2002. It was possible, though inappropriate, that it was initially thought that his death was not suspicious and that he had died of a natural cause process.

On 2 July 2002 , however, after he had conducted the autopsy, Dr Botterill sought to contact the Sgt (now Inspector) Forbes at the Sydney Crime Scene Unit. He apparently spoke to Constable Tracey Bloomfield who left the following message:

> *"Dave could you call Dr Botterill at Glebe.. re the deceased you and I attended last week in Pyrmont. (The security guard in the Gym). Apparently the PM reveals a pink discolouration to the stomach lining which suggests carbon monoxide poisoning. He wanted to have a quick chat to you regarding this matter. Thanks Tracey."*

Inspector Forbes in his statement says in respect of this matter that:

> *"Later I spoke to Dr Paul Botterill who indicated to me that when he conducted the post mortem examination of the deceased there was pink discolouration to his stomach lining which was consistent with carbon monoxide poisoning. Following this the investigating police again attended the scene and I was advised that the heating system for the swimming pool near the gymnasium was located outside the building."*

Inspector Forbes was thus aware that the probable cause was CO poisoning yet Constable Pinazza, the officer in charge of the

investigation, gave evidence that she did not become aware of this until she received the autopsy report some time after 3 September 2002. Inspector Forbes had no recollection of having communicated this information to Constable Pinazza and there is no documentary evidence available to suggest that he did. I am satisfied that he did not.

The probability of Mr Dani's death being due to CO poisoning meant that it was probable that his death was work related. In such situation police were obliged to notify the Authority of the death so that the Authority can commence its own investigation. Although it did appear that there were some unsuccessful attempts by police in October 2002 to contact a Garry Rider from the Authority those attempts were not followed through and the authority does not appear to have become involved in the investigation until December 2003 when the Court itself approached it about the matter.

In addition in about 19 February 2003 a statement was taken from Mr Dani's sister, his senior next of kin in Australia, and at that time she stated that she did not know the cause of her brother's death.

This history shows an appalling lack of attention to the proper investigation of Mr Dani's death on the part of the police force. The breakdown in the investigation appears to have resulted from two factors:

- The failure of Inspector Forbes to properly document and communicate to the officer in charge of the investigation, Constable Pinazza, essential evidence relating to the death of Mr Dani – the probable cause of his death, and

- The lack of experience of Constable Pinazza and the failure of her supervisors to provide her with appropriate support and advice in the conduct of a complex investigation, particularly when she sought to be removed as officer in charge because she did not believe that she was sufficiently experienced to undertake the investigation.

This failure by the police to properly investigate the events that led to the death of Mr Dani had a number of serious, and potentially serious, consequences.

The failure to take early action to identify the source of the CO meant that there was a real possibility of further injury or death to other occupants of the building. Ms Ramadass had been hospitalised and Mr Dani had died and as a result. It was only by chance that the day after Mr Dani's death Mr Lowden attended to service the heater and recommended that the roof over the enclosure be removed. Fortunately Mrs Cabrera agreed to this recommendation and Mr Moddel removed the roof on 22 July 2002.

Dr Botterill advised Inspector Forbes on 2 July 2002 that CO poisoning was the likely cause of Mr Dani's death. The CO had to have come from somewhere. Until the source was identified it remained a potential danger to anyone using the facilities. It was the responsibility of the police to ensure that the risk was mitigated. Notwithstanding this no action was taken by police to close the gymnasium and pool until the source of the CO was determined. The danger of further death or injury thus remained in existence for another three weeks. It is only by the

coincidence of Mr Lowden's attendance and good luck that this did not occur.

The failure to investigate the source of the CO in a timely manner by the initial investigators also resulted in the matter becoming more difficult when it was subsequently allocated to Senior Constable Wood to prepare the matter for inquest.

During the course of Senior Constable Wood's investigation there were a number of matters of importance that could not be determined that a timely investigation could have resolved including, but not limited to, identification of evidence such as:

1. Was the split system air conditioner operating,
2. Was the pool pump operating,
3. Was the gas heater operating,
4. Was the mechanical ventilation system operating,
5. What was the service history for the pool pump, gas heater and mechanical ventilation system,
6. When was the roof placed on the pool heater enclosure, why, and by whom,
7. Had anyone else been affected when using the gymnasium and pool,
8. Who were the people seen on the CCTV a short time before Mr Dani entered the gymnasium, and
9. Was CO gas still present in the gymnasium in the days following Mr Dani's death?

The failure to treat the investigation of Mr Dani's death with the seriousness that it deserved would ordinarily be the basis for the making

of recommendations pursuant to Section 82 of the Coroners Act 2009. I must, however, take into account the length of time since these events occurred and the changes in procedures that have been implemented since that time.

Police undertake the investigation of a death, such as that of Mr Dani, on behalf of the coroner. In 2002 there was little, if any, active management of coronial investigations by coroners until the police produced the brief of evidence. In some circumstances this resulted in extended delays because the provision of the brief was dependant on the availability of police resources. Since the appointment of the current State Coroner however a system of review has been implemented whereby the preparation of the police brief is actively supervised.

Had the current system of management of investigations been in place in 2002 the police brief of evidence would have had to be submitted to the court by early October 2002 and then it together, with the autopsy report, would be referred to either the State Coroner, or one of the Deputy State Coroners, for review. If the investigation were, at that stage, not found to be satisfactory the coroner would be in a position to direct further investigation to occur. Unfortunately, in this case, this did not occur until the latter part of 2006 and the investigation undertaken by Senior Constable Wood since that time has, although inhibited by the passing of time, been a most professional one.

Having regard to the above it is my view that making recommendations concerning this matter would be of little efficacy as the problems that occurred in this matter would be unlikely to occur if such a death were to

happen today. As such I do not propose to make recommendations relating to this matter.

The management and maintenance of strata developments.

The management of the premises by the building managers, the decision making process of the Owners Corporation and the relationship between the Owners Corporation and the Strata Managers were matters of interest during the course of the inquest. Those matters raised issues concerning the qualifications and experience of the managers to undertake the management of the premises, the obtaining of proper documentation relating to equipment and other matters within the premises when the premises were handed over to the Owners Corporation by the builder and or the developer and the maintenance of appropriate records by or on behalf of the Owners Corporation.

There were a number of concerns identified by Senior Constable Wood in respect of these matters during his investigation that made his investigation more difficult. As a consequence it was submitted that certain recommendations pursuant to section 82 ought be made to the Minister responsible for legislation dealing with strata titles to address those concerns.

I do not propose to go into the details of Senior Constable Wood's concerns in respect of the premises and whilst recognising the validity of those concerns I am not satisfied that the evidence available to me is sufficient for me to form the view that the matters raised are systemic to the industry or that I have sufficient evidence available to enable me to make relevant recommendations. Indeed I am aware that since 2002

there have been in excess of a dozen amendments to the relevant legislation and that some of the matters raised by Senior Constable Wood may well have already been the subject of review by the relevant Minister. In the circumstances I do not propose to make the recommendations proposed.

The dangers of carbon monoxide produced by domestic heaters.

Mr Dani died when an external gas heater produced CO and because it was enclosed the CO was able to accumulate in the area in which Mr Dani was required to be in the course of his employment. During the course of the inquest evidence was given that the danger of CO poisoning was not as well known as it was in colder northern hemisphere countries. It was suggested that in addition to dangers in the nature of that which led to Mr Dani's death with the growing number of apartment dwellers in Australian cities problems could occur where balconies on which gas barbecues were located were enclosed. It was submitted that it would be appropriate for recommendations to be made in accordance with section 82 that would bring such dangers to the attention of persons managing buildings and the community in general. I consider that to make such a recommendation would be appropriate and propose to do so.

Magistrate P.A. Mac Mahon
Deputy State Coroner
28 July 2011