

IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2015 4662

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)

Section 67 of the Coroners Act 2008

I, AUDREY JAMIESON, Coroner having investigated the death of JARROD JOSEPH DEBONO

without holding an inquest:

find that the identity of the deceased was JARROD JOSEPH DEBONO

born 30 January 1994

and the death occurred on 13 September 2015

at The Northern Hospital, 185 Cooper Street, Epping Victoria 3076

from:

1 (a) ELECTROCUTION

Pursuant to section 67(1) of the **Coroners Act 2008**, I make findings with respect to **the following circumstances:**

1. Jarrod Joseph Debono was 21 years of age at the time of his death. He lived with his parents in Mill Park and had no significant medical history. Mr Debono was a third year apprentice electrician and was employed by Joseph Brancati Electrics in Epping.
2. On Sunday 13 September 2015, Mr Debono planned to assist his girlfriend's sister Amy Cross and her husband Shane Cross, by replacing several existing house lights with new Light Emitting Diode (LED) down lights at their home at 8 Hawthorn Court, Mill Park.
3. At approximately 4.30pm on 13 September 2015, Mr Debono was working in the roof space of the house, while Mr Cross was standing on top of the roof, removing tiles to let some air in, and Mrs Cross was standing on a ladder inside a man hole, partially within the roof cavity. Mr Cross passed a pair of pliers to Mr Debono and started talking to Mrs Cross. Mr Debono

suddenly yelled and slumped forward; lying on his stomach and shaking. Mr Cross entered the roof cavity and noticed a bare wire near Mr Debono's left forearm. He pushed Mr Debono to the side.

4. Mrs Cross contacted emergency services and commenced cardiopulmonary resuscitation (CPR); Mr Debono was unconscious but breathing. Mr Cross' friend, Tyson Wells, who was also completing works on the house, approached the meter box and turned all the circuit breaker switches to the off position. Ambulance paramedics arrived shortly afterwards and continued CPR within the roof cavity. Metropolitan Fire Brigade members attended and assisted with moving Mr Debono from within the roof to the ground. Ambulance paramedics confirmed that a full cardiac arrest had occurred, and transported Mr Debono to The Northern Hospital, in a critical condition. Police, Energy Australia, Ausnet Services and WorkSafe Victoria employees also attended.
5. Upon arrival at The Northern Hospital's Intensive Care Unit, Mr Debono evinced dilated and poorly reactive pupils, combined with metabolic and respiratory acidosis. He experienced temporary cardiovascular improvement before deteriorating, becoming asystolic despite maximum inotropic support. At 11.40pm on 13 September 2015, Mr Debono was declared deceased.

INVESTIGATIONS

Forensic Pathology investigation

6. Dr Jia Hao Wu, Forensic Pathology Trainee, supervised by Dr Sarah Parsons, Forensic Pathologist at the Victorian Institute of Forensic Medicine performed a full post mortem examination upon the body of Mr Debono, reviewed a post mortem computed tomography (CT) scan and medical records from the Northern Hospital, and referred to the Victoria Police Report of Death, Form 83. At autopsy, Dr Wu observed, *inter alia*, a cutaneous electric mark on Mr Debono's right index finger, which was confirmed upon microscopic examination.
7. Toxicological analysis of post mortem blood detected amiodarone¹ and lignocaine.² Dr Wu noted that amiodarone was administered during Mr Debono's hospital admission. While there was no documentation of lignocaine within the medical records, Dr Wu noted that it is

¹ Amiodarone is a class III antiarrhythmic agent prolonging the action potential duration, giving a broad spectrum of activity.

² Lignocaine is a local anaesthetic often administered to patients prior to surgery or during resuscitation attempts. It can also be used as an anti-arrhythmic drug to return the heart to a more regular rhythm.

commonly used as a local anaesthetic and for the treatment of abnormal heart rhythms, especially during resuscitation. On the evidence available to him, Dr Wu ascribed the cause of Mr Debono's death to electrocution.

Police investigation

8. First Constable Shanice Vilone, the nominated coroner's investigator,³ conducted an investigation of the circumstances surrounding Mr Debono's death, at my direction, including the preparation of the coronial brief. The coronial brief contained, *inter alia*, statements made by Mr Debono's father Joseph Debono, sister Amy Cross, brother in law Shane Cross and Detective Senior Constable David Breer. The brief also contained correspondence from Mr Cross' friend Tyson Wells, and an Energy Safe Victoria Report by Enforcement Officer Simon O'Leary.
9. Mr Cross reported that when Mr Debono arrived at his house on 13 September 2015, he turned off all the power to the lights on the meter box, but left the remainder of the power on. Mr Cross stated that Mr Debono then proceeded to replace numerous lights throughout the house. After changing several lights, Mr Debono turned the electricity back on at the meter box. However, some of the lights were not working, including some he had not changed. Mr Cross stated that Mr Debono began to test the LED down lights, with the power on, in search of a fault. According to Mr Cross, Mr Debono was becoming worried as he tried to figure out the problem. Mrs Cross noted that Mr Debono was becoming frustrated because he could not work out what was wrong. She said that it was really hot up in the roof, and that Mr Debono had been determined to fix the lights.
10. Mr Cross stated that after Mr Debono had been in the roof cavity by himself for approximately 40 minutes, they began to follow a cable in search of the fault. When they were above the bathroom, Mr Debono said that he had found the problem and that he had hooked up the last light wrongly. Mr Cross stated that just after he passed Mr Debono his pliers, he noticed he was undoing the back of the light socket with his screw driver.
11. The investigation did not identify any issues with the treatment provided by the attending emergency services or Mr Debono's medical management.

³ A coroner's investigator is a police officer nominated by the Chief Commissioner of Police or any other person nominated by the coroner to assist the coroner with his/her investigation into a reportable death. The coroner's investigator takes instructions direction from a coroner and carries out the role subject to the direction of a corner.

12. Det. Senior Constable Breer reported that he spoke with Enforcement Officer Simon O'Leary at the Mill Park premises, and was informed that as a third year apprentice, Mr Debono was not a licenced electrician. He was therefore only able to perform tasks which his employer deemed him competent of performing. Joseph Debono stated that he spoke to his son's employer on 14 September 2015, and was informed that he was more than capable of doing the type of light-replacement work.

Energy Safe Victoria Investigation

13. In his incident report dated 10 November 2015, Mr O'Leary wrote that it appeared that a broken neutral conductor at the three-pin-plug-base in the roof space, which supplied electricity for the light fitting for the bathroom, had caused all the lights on that circuit not to work. Mr O'Leary concluded that Mr Debono was fault finding in the roof space and had located the broken neutral conductor that was causing the fault. It appeared that the lighting circuit was energised and the lights were switched on.
14. Mr O'Leary said it seemed that Mr Debono was in the process of stripping the live neutral conductor with pliers, while being in contact with earthed parts of the house - a copper water pipe or metal frame of the bathroom's combination heat light and fan - completing the electrical circuit and causing him to receive an electrical shock, causing him to fall or convulse and strike his head heavily on a beam in the roof space.
15. As part of the investigation, power was reinstated to the circuit and 241 Volts AC was measured on the partially stripped neutral conductor to both the earthed water pipe and to the earthed fan frame in the roof space that was in the vicinity. The circuit was controlled by a HPM 8 amp 1.5kA plug-in circuit breaker and no Residual Current Devices (RCDs), otherwise known as safety switches, were installed. Mr O'Leary noted that Section 43(4) of the *Electricity Safety Act 1998* requires a person carrying out electrical work to ensure that all electrical circuits or equipment being worked on are disconnected from the electricity supply; or that adequate precautions are taken to prevent electric shock or other injuries. Mr O'Leary concluded that Mr Debono did not disconnect the electricity supply from the circuits or equipment being worked on and did not take adequate precautions to prevent electric shock or other injuries.
16. In his statement, Det. Senior Constable David Breer reported that when he spoke with Mr O'Leary on 13 September 2015, he was informed that Mr Debono appeared to have been using the pliers to strip the outer casing from a broken wire above the bathroom. Mr O'Leary

informed Det. Senior Constable Breer that an 'earthing' was required to allow the electricity to travel through Mr Debono, and that he must have touched the metal tip of the pliers he was using, allowing the electricity to enter his body. He added that the house did not have a 'safety cut-out' (safety switches), which would have detected the sudden flow of electricity which occurs during an electrocution and stopped the electricity, meaning Mr Debono would have received a moderate shock, still capable of causing serious harm. As there was no cut-out, Det. Senior Constable Breer was informed that Mr Debono would have continued to receive an electrical shock until the circuit's load was reached, resulting in a much more severe electrocution.

WorkSafe Victoria investigation

17. First Constable Shanice Vilone reported that WorkSafe Inspector Colin Skinner attended the Mill Park premises on 13 September 2015. Correspondence between WorkSafe Inspector Ann Lee and Mr O'Leary dated 14 September 2015, indicated that WorkSafe believed Mr Debono was undertaking work for a family member of his girlfriend and the location did not fall within the definition of a 'workplace', so WorkSafe would not be taking further action.

Further investigations regarding Residual Current Devices or Safety Switches

18. An undated Energy Safe Victoria brochure, entitled 'Electrical Safety – Safety Switches Save Lives' noted that 'a safety switch monitors the flow of electricity through a circuit. It detects a problem as soon as the current leaves the circuit, and turns the power off within 0.03 of a second. That's quick enough to help save your life...' The brochure also added that 'in Victoria, it is mandatory for safety switches to be installed on both the power and lighting circuits in new properties – and older properties when extensive renovations are carried out.' The Energy Save Victoria website⁴ noted the distinction from circuit breakers and surge diverters, which do not act as safety switches for personal protection against electric shock.
19. On 9 March 2011, Coroner Ronald Saines delivered a Finding following an Inquest into the Death of David Spence. Mr Spence died on 27 February 2010, in circumstances where he had entered the roof cavity at his home without turning off the power supply to the building and there were no RCDs installed. He was found in close proximity to a section of live metal conduit, and it was clear he was electrocuted.

⁴ See: <http://www.esv.vic.gov.au/For-Consumers/Gas-and-electrical-safety-in-the-home/Electrical-safety-in-the-home/Safety-switches-surge-diverters-circuit-breakers>, accessed 8 August 2016.

20. In his Finding, Coroner Saines noted that RCDs have been required since 2007 in new installation of lighting or power supplies, and also in renovations. His Honour referred to section 43(4) of the *Electricity Safety Act 1998* and added that the *Electricity Safety (Installations) Regulations 2009*, include obligations for the installation of RCDs and maintenance of complying wiring systems.⁵
21. In response to Coroner Saines' recommendations, by letter dated 14 May 2012, the Law Institute of Victoria observed that the government could consider introducing a mandatory obligation to install RCDs based on the model in place in Western Australia. In that State, since 9 August 2009, all homes that are sold and all rental properties must be fitted with a RCD.
22. In their final response to recommendations, dated 29 August 2012, Energy Safe Victoria noted that RCDs were first mandated in Victoria in 1992, when regulatory changes required most socket outlets in domestic installations to be RCD protected. Energy Safe Victoria noted that since then, the requirements for RCD protection of electrical installations in residential and non-residential premises have been progressively extended. It was added that RCDs must now be fitted on all power and lighting circuits in new homes and when alterations and additions, such as renovations and extensions, are carried out on existing homes. It was noted that mandatory retrofitting of RCDs in Victorian homes have been raised on a number of occasions over the past decade, but Energy Safe Victoria was not aware of any compelling evidence or analysis to support such an initiative.
23. The Court contacted Energy Safe Victoria on 9 August 2016, and was advised that the organisation's position regarding mandatory retrofitting of RCDs remained unchanged. The view was expressed that pursuant to the current regulations, over time, all installations will be upgraded and receive RCD protection.
24. By way of email dated 11 August 2016, the Court received information from Andrew Padanyi, Solicitor at Energy Safety Victoria. Mr Padanyi advised that consideration is now being given by the relevant standards committee to amending the Australian/New Zealand Wiring Rules to extend requirements to all circuits in residential premises (including circuits supplying electric ovens and water heaters, which are not currently required to be RCD protected) and electrical installations in commercial and industrial premises. Mr Padanyi confirmed that Regulation 202 of the *Electricity Safety (Installations) Regulations 2009* requires compliance with the Wiring

⁵ I note that Regulation 202 of the *Electricity Safety (Installations) Regulations 2009* relates to wiring methods and pertains largely to requirements contained in the 'Australian/New Zealand Wiring Rules'.

Rules whenever electrical installation work is carried out, and the requirement to install RCDs may be triggered when electrical installation work is being carried out, depending on the nature of the work and the premises.

25. I note that Mr Spence's home was constructed in the 1950s or 1960s. An internet search for the premises at 8 Hawthorn Court, Mill Park, indicated that the home was built in 1990.⁶ I note that this is also before the instigation of regulations relating to the mandating of RCDs.

COMMENTS

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comments connected with the death:

1. Mr Debono's experience as a third year apprentice electrician would have most likely exposed him to the importance of complying with the *Electricity Safety Act 1998* and regulations, and ensuring that all electrical circuits or equipment handled in the course of work are disconnected from the electricity supply, or that adequate precautions be taken to prevent electric shock or other injury in the handling of electrical circuits or electrical equipment. The evidence suggests that Mr Debono was operating in a very warm roof cavity environment, for an extended period of time, and was becoming frustrated in his efforts to locate the fault. In these circumstances, it is possible that Mr Debono may have been distracted from following appropriate procedures and observing safe work practices, which were particularly important in the absence of a Residual Current Device.

FINDINGS

Mr Debono's death is a tragic reminder of the inherent dangers associated with installing electrical equipment, and the importance of adhering to safe work practices.

The evidence indicates that Mr Debono died in circumstances where no Residual Current Device was installed, and the electricity supply was not disconnected from the circuits or equipment being worked on.

On the evidence available to me, I am unable to find as to whether a mandatory Residual Current Device was required pursuant to regulations, given that the house appears to have been built prior to 1992, and it is unclear if renovations or extensions have since been carried out. Having regard to the circumstances and that all the power to the home remained on while Mr Debono was performing electrical work, I am unable to find that the presence of a Residual Current Device would have

⁶ See: <https://www.realestate.com.au/property/8-hawthorn-ct-mill-park-vic-3082>, accessed 8 August 2016.

definitely prevented Mr Debono's death. However, I do find that Residual Current Devices are effective safety tools, and their absence in this case means that an opportunity to possibly prevent the outcome was lost.

I accept and adopt the medical cause of death as identified by Dr Jia Hao Wu and find that Jarrod Joseph Debono died from electrocution in circumstances that were preventable.

RECOMMENDATIONS

Pursuant to section 72(2) of the **Coroners Act 2008**, I make the following recommendation connected with the death:

1. With the aim of improving public health and safety and preventing like deaths, and noting that Energy Safe Victoria have thus far declined to pursue the mandatory retrofitting of Residual Current Devices in Victorian homes, **I recommend** that Mr Adam Fennessy, Secretary of the Department of Environment, Land, Water and Planning conduct a feasibility assessment on implementing the Western Australian model in Victoria, whereby all homes that are sold and all rental properties would be fitted with a Residual Current Device.

Pursuant to section 73(1A) of the Coroners Act 2008, I order that this Finding be published on the internet.

I direct that a copy of this finding be provided to the following:

Mr Joseph Debono

The Hon Liliansa D'Ambrosio, Victorian Minister for Energy, Environment and Climate Change

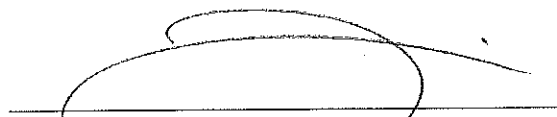
Mr Adam Fennessy, Secretary of the Department of Environment, Land, Water and Planning

Mr Simon O'Leary, Energy Safe Victoria

Mr Colin Skinner, WorkSafe Victoria

Senior Constable Shanice Vilone

Signature:



AUDREY JAMIESON

CORONER

Date: 1 September 2016

