IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2020 2088

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)
*Section 67 of the **Coroners Act 2008***

Findings of:	Caitlin English, Deputy State Coroner
Deceased:	Ricky James Madsen
Date of birth:	12 September 1988
Date of death:	16 April 2020
Cause of death:	1(a) Electrocution
Place of death:	Substation at 100 Laurens Street, North Melbourne, Victoria

INTRODUCTION

1. On 16 April 2020, Ricky James Madsen was 31 years old when he died from electrocution after accessing a substation. At the time of his death, Mr Madsen lived at Dandenong.

THE CORONIAL INVESTIGATION

2. Mr Madsen's death was reported to the Coroner as it fell within the definition of a reportable death in the *Coroners Act 2008* (**the Act**). Reportable deaths include deaths that are unexpected, unnatural or violent, or result from accident or injury.

3. The role of a coroner is to independently investigate reportable deaths to establish, if possible, identity, medical cause of death, and surrounding circumstances. Surrounding circumstances are limited to events which are sufficiently proximate and causally related to the death. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability.

4. Under the Act, coroners also have the important functions of helping to prevent deaths and promoting public health and safety and the administration of justice through the making of comments or recommendations in appropriate cases about any matter connected to the death under investigation.

5. The Victoria Police assigned an officer to be the Coroner's Investigator for the investigation of Mr Madsen's death. The Coroner's Investigator conducted inquiries on my behalf, including taking statements from witnesses – such as family, the forensic pathologist, treating clinicians and investigating officers – and submitted a coronial brief of evidence. I also sought additional information from CitiPower and Energy Safe Victoria and data regarding similar deaths.

6. This finding draws on the totality of the coronial investigation into Mr Madsen's death, including evidence contained in the coronial brief. Whilst I have reviewed all the material, I will only refer to that which is directly relevant to my findings or necessary for narrative clarity. In the coronial jurisdiction, facts must be established on the balance of probabilities.[1]

[1] Subject to the principles enunciated in *Briginshaw v Briginshaw* (1938) 60 CLR 336. The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about, individuals unless the evidence provides a comfortable level of satisfaction as to those matters taking into account the consequences of such findings or comments.

MATTERS IN RELATION TO WHICH A FINDING MUST, IF POSSIBLE, BE MADE

Identity of the deceased

7. On 16 April 2020, Ricky James Madsen, born 12 September 1988, was visually identified by his stepfather, Jessie Walton.

8. Identity is not in dispute and requires no further investigation.

Medical cause of death

9. Forensic Pathology Registrar, Dr Joanne Ho (supervised by Dr Brian Beer, Forensic Pathologist), from the Victorian Institute of Forensic Medicine (**VIFM**), conducted an examination on 20 April 2020 and provided a written report of her findings dated 11 June 2020.

10. The post-mortem examination did not show any obvious electrocution entry or exit point. Dr Ho explained that most electrocution deaths are from cardiac arrhythmias (problem with the rhythm or rate of the heartbeat), usually a ventricular fibrillation (fast heart rhythm). This is caused by the passage of a current through the heart. The less common mechanism is due to respiratory arrest, whereby the passage of a current passes through the chest causing the muscles and diaphragm to go into a spasm and become paralysed leading to death.

11. Toxicological analysis of post-mortem samples identified the presence of ethanol (alcohol), methylamphetamine[2] and amphetamine, and cannabis.[3]

12. Dr Ho provided an opinion that the medical cause of death was *"1(a) Electrocution"*.

13. I accept Dr Ho's opinion.

Circumstances in which the death occurred

14. On 16 April 2020, Mr Madsen, along with his mother, Tanya Luttgens, and stepfather, Jessie Walton, attended a substation located at 100 Laurens Street, North Melbourne. The site was mainly a vacant block, but a small substation was located at the rear. The substation was

[2] Amphetamines is a collective word to describe central nervous system stimulants structurally related to dexamphetamine. One of these, methamphetamine, is often known as 'speed' or 'ice', which is a strong stimulant. Amphetamine is also a metabolite of methamphetamine, benzfetamine, and selegiline. Amphetamines stimulate the central nervous system, causing persons to become hyperactive and more aroused. Blood pressure and heart rate are also increased.

[3] Delta-9-tetrahydrocannabinol is the active form of cannabis. Persons under the influence of cannabis will experience impaired cognition (reasoning and thought), poor vigilance, and impaired reaction times and coordination.

owned by CitiPower and contained several transformers for the purpose of bringing high-voltage electricity down to 400 and 230 volts. The site was surrounded by 2.5-metre-high fences and an adjoining building. The only access point was a gate at Laurens Road, which was secured by a large chain and lock.

15. Mr Walton later told Senior Constable Nicholas Rhall, Coroner's Investigator, that he and Mr Madsen were *"urban explorers"* and had found the substation that day and went in for a look. He said that the door to the substation was unlocked. Police later observed that the padlock had been cut and removed from the hasp and staple arrangement.

16. Mr Walton told police that Mr Madsen became excited when he observed a large amount of copper wire that had previously been cut and began collecting it. I note that police later found a used angle grinder cutting disc at the scene, but not the actual grinder. There was evidence that an angle grinder or similar tool had been used to completely cut through one conductor and damage another two.

17. According to Mr Walton, Mr Madsen subsequently grabbed a blue wire, which electrocuted him. Mr Walton then used a wooden stick to remove Mr Madsen's hand from the wire, at which point Mr Madsen fell into a pit. Emergency services were contacted to attend.

18. Attending emergency services, who arrived at approximately 4.30pm, were delayed while CitiPower employees ensured the substation was safe. Attending paramedics then entered and confirmed Mr Madsen was deceased. I note that when emergency services arrived at the scene, the gates that had been secured with a lock and chain, were open.

19. Attending police members later found a shifter wrapped around a piece of wire in the substation. The wire was connected to a neutral busbar. Several bolts from the busbar had been removed and were found on the floor. Several neutral wires had also been cut.

20. Energy Safe Victoria conducted an investigation, which could not determine the precise cause of the electrocution. However, the most likely cause was Mr Madsen using an uninsulated shifting spanner to disconnect a neutral conductor from a neutral busbar, which meant it became live and Mr Madsen became the current path to complete the electrical circuit, resulting in his electrocution.

21. On the evidence before me, I do not accept that Mr Madsen was merely an 'urban explorer'. The evidence reveals the site was secured by 2.5-metre-high walls and a locked gate, and the substation itself was secured by a hasp and staple arrangement with a padlock. Police found

evidence of electrical equipment that had been cut with an angle grinder and a shifter had been left wrapped around wires at the exact place where Mr Madsen was electrocuted. I am satisfied to the coronial standard of proof that Mr Madsen brought the shifter with him, and possibly further equipment that has not been found, to the site with the intention of breaking into the substation to steal copper. Unfortunately, those decisions have led to his death.

FURTHER INVESTIGATION

22. As part of my investigation, I obtained statements from CitiPower and Energy Safe Victoria about whether there was appropriate signage warning of the risks of entering the area. I also obtained data from the Coroners Prevention Unit (**CPU**) about other deaths occurring in the context of copper theft.[4]

Required signage

23. Energy Safe Victoria confirmed current requirements are found in Australian Standard AS 2067 as follows:

> *6.9.2 Information plates and warning plates*
>
> *In closed electrical operating areas and in industrial buildings, all electrical equipment rooms shall be provided, on the outside of the room and on each access door, with necessary information identifying the room and pointing out any hazards. Wording on signs at these locations shall consist of letters not less than 12 mm high and shall contain the words 'DANGER—HIGH VOLTAGE'.*
>
> *The colours and contrasting colours shall comply with national regulations.*
>
> *NOTE: Requirements for safety signs are contained in AS 1319.*

24. However, as the substation located at 100 Laurens Street was an old substation, the current standards were not applicable when it was constructed. It was likely subject to the requirements under the Wiring Regulations 1961, which provided as follows:

[4] The Coroners Prevention Unit (**CPU**) was established in 2008 to strengthen the prevention role of the coroner. The unit assists the Coroner with research in matters related to public health and safety and in relation to the formulation of prevention recommendations. The CPU also reviews medical care and treatment in cases referred by the coroner. The CPU is comprised of health professionals with training in a range of areas including medicine, nursing, public health and mental health.

Regulation 820(g) Danger notices

Conspicuous danger notices shall be provided at suitable positions on the outside of the substation enclosure and at the means of access to the substation. Each notice shall contain the word "DANGER" in bold letters not less than 1½ in. high, and shall state the nominal high voltage at which the apparatus operates. All such notices shall be of an indelible nature and shall be permanently maintained in a legible condition.

25. Michael Hayes from CitiPower provided a statement noting that the Energy Networks Association has *National Guidelines for Prevention of Unauthorised Access to Electricity Infrastructure (ENA Doc 015:2006).* Section 5.8 details signage requirements for electricity infrastructure and outlines that the general purposes of signage on electrical infrastructure is to:

    (a) warn of the hazard;

    (b) provide a deterrent to access or other unauthorised activity;

    (c) provide contact information to the general public concerning the site;

    (d) meet any legal obligation arising from duty of care to the public and staff.

26. ENA Doc 015: 2006 also provides general guidance that safety signage should comply with *AS 1319 Safety signs for the occupational environment* and *AS 2342 Development, testing and implementation of information and safety symbols and symbolic signs.*

27. *CitiPower/Powercor Technical Standard DS011 Signage & Labelling General Information* details the standard layout and placement of signs and labels on CitiPower and Powercor distribution assets and references AS 1319 and AS 2342. Signs should be securely installed wherever there is a risk of unauthorised access to electrical infrastructure and should be located where the messages are easily seen and read.

28. *CitiPower/Powercor DS901-999 Distribution Material Standard – Signage & Labelling (DS923)* outlines the specifications for High Voltage Danger. These signage specifications are in accordance with ENA Doc 015:2006 Section 5.8 guidelines and referenced in AS 1319 and AS 2342. This Distribution Standard requires that all indoor and ground type substations shall have one 500mm x 250 mm "DANGER HIGH VOLTAGE, KEEP OUT" sign fitted as per DS923 to each security fence gate or access door providing access to the substation area.

29. Mr Hayes stated at the time of Mr Madsen's death, signage in accordance with CitiPower/Powercor Technical Standards DS923, DS411, DS011 and ENA Doc 015:2006 Section 5.8 and AS 1319 and AS 2342 was securely installed on all access doors to the electricity substation at 100 Laurens Street, North Melbourne.

30. Mr Hayes attended the site on 17 April 2020 and confirmed that the signage was easily seen, able to be read, and clearly visible.

31. I am therefore satisfied that there was appropriate signage located at the substation warning of the inherent risks of entering the area. I am further satisfied that there was no legitimate reason for Mr Madsen to be there and the inherent danger of accessing the site was appropriately and clearly displayed. Sadly for his family, it appears he ignored those risks and lost his life as a result.

Deaths occurring during copper theft

32. The CPU identified three deaths that occurred in the context of stealing copper between 2015 and 2020 Australia-wide. One of the deaths was Mr Madsen. The following common factors were noted:

    (a) the deceased had entered premises without permission with the intent of stealing copper;

    (b) the sites were secured and therefore the deceased had to break in; and

    (c) the deceased were all users of methamphetamine, which was detected in post-mortem toxicology tests in every case.

33. Given the deaths occurred in the context of illegal activity and an assumption of the inherent risks involved, I can see no prevention opportunities.

FINDINGS AND CONCLUSION

34. Pursuant to section 67(1) of the Act I make the following findings:

    (a) the identity of the deceased was Ricky James Madsen, born 12 September 1988;

    (b) the death occurred on 16 April 2020 at a substation located at 100 Laurens Street. North Melbourne, Victoria, from electrocution; and

(c) the death occurred in the circumstances described above.

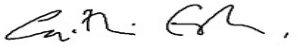
I convey my sincere condolences to Mr Madsen's family for their loss.

In accordance with section 73(1A) of the Act I direct this finding be published on the Internet in accordance with the rules.

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

Jamie Madsen, senior next of kin
Tanya Luttgens, senior next of kin
Jade Webb
CitiPower
Energy Safe Victoria
Senior Constable Nicholas Rhall, Victoria Police, Coroner's Investigator

Signature:



Caitlin English, Deputy State Coroner

Date: 13 February 2022

NOTE: Under section 83 of the ***Coroners Act 2008*** ('the Act'), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.