IN THE CORONERS COURT

OF VICTORIA

AT MELBOURNE

Court Reference: COR 2014 5284

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 JOHN FRANCIS STEPHENSON

without holding an inquest:

find that the identity of the deceased was JOHN FRANCIS STEPHENSON

born 14 May 1937

and the death occurred on 14 October 2014

at Camp Street, Chelsea Victoria 3196

from:

1 (a) MULTIPLE INJURIES SUSTAINED IN AN AVIATION INCIDENT (PILOT)

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

1. John Francis Stephenson was 77 years of age at the time of his death. Mr Stephenson lived in Hampton East, with his wife Joyce. He commenced learning to fly during the 1980s, and held a Valid Flight Crew Licence at the time of the collision. In 1999, Mr Stephenson began building a kit aircraft, a Van's RV-6A, registration VH-JON.

2. Mr Stephenson was involved in aircraft incidents near Yarram Airport in September 2007, and at the Latrobe Valley airstrip in December 2010. After these events, Mr Stephenson completed repairs on his Van's RV-6A aircraft and installed new engines. On 15 July 2014, Mr Stephenson experienced a minor engine fire at Moorabbin. The fire was extinguished by staff at the airport, and no one was injured on this occasion.

3. On Tuesday 14 October 2014 at approximately 1.23pm, Mr Stephenson took off in a southerly direction in his Van's RV-6A aircraft, from Moorabbin Airport. Mr Stephenson made standard radio departure calls and climbed to approximately 2900 feet and maintained this altitude. A short time later, as the aircraft approached the coast of Port Phillip Bay, it started descending and disappeared from radar, passing through 2600 feet at a rapid descent rate of approximately 35 degrees trajectory and approximately 200 knots or 370km/h. A witness reported observing a black flight bag falling from the aircraft. Another witness described the plane as descending at a steady angle to the ground.

4. The aircraft impacted with a fence and house at 12 The Strand in Chelsea, before continuing along Camp Street in a southerly direction. The collision was eight kilometres south of Moorabbin Airport. Emergency services personnel including Victoria Police, Ambulance Victoria, State Emergency Services and Country Fire Authority members attended within minutes, but were unable to render assistance; Mr Stephenson was confirmed to be deceased. No other people were physically injured. Following the incident, members of the public found aviation-related items up to three kilometres away from the collision site.

JURISDICTION

5. Mr Stephenson's death was determined to be a reportable death under section 4 of the *Coroners Act 2008* ('the Act'), because it occurred in Victoria and was considered unexpected, unnatural or to have resulted, directly or indirectly, from an accident or injury.

PURPOSE OF THE CORONIAL INVESTIGATION

6. The Coroners Court of Victoria is an inquisitorial jurisdiction.[1] The purpose of a coronial investigation is to independently investigate a reportable death to ascertain, if possible, the identity of the deceased person, the cause of death and the circumstances in which the death occurred.[2] The cause of death refers to the medical cause of death, incorporating where possible the mode or mechanism of death. For coronial purposes, the circumstances in which death occurred refers to the context or background and surrounding circumstances, but is confined to those circumstances sufficiently proximate and causally relevant to the death and not merely all circumstances which might form part of a narrative culminating in death.[3]

---

[1] Section 89(4) *Coroners Act 2008*.
[2] Section 67(1) of the *Coroners Act 2008*.
[3] This is the effect of the authorities- see for example *Harmsworth v The State Coroner* [1989] VR 989; *Clancy v West* (Unreported 17/08/1994, Supreme Court of Victoria, Harper J).

7. The broader purpose of coronial investigations is to contribute to the reduction of the number of preventable deaths through the findings of the investigation and the making of recommendations by coroners, generally referred to as the 'prevention' role.[4] Coroners are also empowered to report to the Attorney-General on a death; to comment on any matter connected with the death they have investigated, including matters of public health or safety and the administration of justice; and to make recommendations to any Minister or public statutory authority on any matter connected with the death, including public health or safety or the administration of justice.[5] These are effectively the vehicles by which the prevention role may be advanced.[6]

8. It is not the Coroner's role to determine criminal or civil liability arising from the death under investigation. Nor is it the Coroner's role to determine disciplinary matters.

INVESTIGATIONS

Identification

9. A determination by a Coroner of the identity of Mr Stephenson, was completed by Coroner Paresa Spanos at Southbank on 20 October 2014, following a report of scientific testing (DNA comparison), with a sample provided by Gregory Stephenson, Mr Stephenson's son.

Forensic pathology investigation

10. Dr Gregory Young, Forensic Pathology Fellow at the Victorian Institute of Forensic Medicine performed a full post mortem examination upon the body of Mr Stephenson, reviewed a post mortem computed tomography (CT) scan and referred to the Victoria Police Report of Death, Form 83. At autopsy, Dr Young observed marked disruption to Mr Stephenson's body. Moderate interstitial fibrosis and amyloid deposition in the myocardium of the heart were identified, along with atherosclerosis of the aorta. However, Dr Young reported that the role of any natural disease in contributing to Mr Stephenson's death could not be ascertained with any certainty. Toxicological analysis of cavity blood detected alcohol at a concentration of

---

[4] The 'prevention' role is now explicitly articulated in the Preamble and purposes of the Act, in contrast to the *Coroners Act 1985* where this role was generally accepted as 'implicit'.

[5] See sections 72(1), 67(3) and 72(2) of the Act regarding reports, comments and recommendations respectively.

[6] See also sections 73(1) and 72(5) of the Act which requires publication of coronial findings, comments and recommendations and responses respectively; section 72(3) and (4) which oblige the recipient of a coronial recommendation to respond within three months, specifying a statement of action which has or will be taken in relation to the recommendation.

0.03g/mL;[7] Dr Young raised the possibility that this could be due to post mortem processes, rather than consumption of alcohol. Dr Young ascribed the cause of Mr Stephenson's death to multiple injuries sustained in an aviation incident as a pilot.

Police investigation

11. Detective Sergeant (**DS**) Andrew Dobson, the nominated coroner's investigator,[8] conducted an investigation into the circumstances surrounding Mr Stephenson's death, at my direction, including the preparation of the coronial brief. The coronial brief contained, *inter alia*, statements made by Mr Stephenson's wife Joyce Stephenson, son Gregory Stephenson, friend and qualified pilot Robert Barrow, Technical Manager of Recreational Aviation Australia Darren Barnfield, qualified pilot Alan Adams, several attending emergency services personnel, and a number of witnesses to the collision.

12. Joyce Stephenson stated that her husband started learning to fly in the 1980s and obtained numerous pilot qualifications. She said that Mr Stephenson loved flying; he would fly every chance he could.

13. In the course of the investigation it was ascertained that Mr Stephenson was a member of the Sport Aircraft Association of Australia (**SAAA**), a largely voluntary organisation, with chapters throughout the country. The SAAA focuses upon the construction of amateur-built aircraft, and the continuous maintenance of such aircraft. Membership of the SAAA costs approximately $195 per annum. Friend Robert Barrow stated that he knew Mr Stephenson through the SAAA. When they met in 2002, Mr Stephenson had already been working on building his Van's RV-6A aircraft for several years. It was completed in around 2004 or 2005.

14. A number of witnesses suggested that Mr Stephenson's approach to aviation was sometimes considered suboptimal. Technical Manager at Recreational Aviation Australia (**RAA**) Darren Barnfield stated that Mr Stephenson's method of construction of the RV-6A aircraft was *'questionable'* and that *'he lacked basic aircraft knowledge'*. He added that Mr Stephenson was totally responsible for the ongoing maintenance and airworthiness of his aircraft. Alan Adams stated that he is both a qualified commercial pilot and volunteer tester of Van's RV

---

[7] This compares with the 0.05g per 100ml being the legal limit for blood alcohol concentration for fully licensed car drivers.

[8] 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.

model aircraft. Mr Adams tested Mr Stephenson's RV-6A aircraft in 2005 and again in 2008. He stated that Mr Stephenson appeared to show a lack of recency in his flying ability.

15. Mrs Stephenson stated that her husband had been relaxed and in good spirits prior to his death; the couple had recently returned from a six day holiday. Following an examination on 2 October 2014, Mr Stephenson's Civil Aviation Medical Certificate had been reissued. Mr Barrow concurred that in the lead up to the fatal incident, Mr Stephenson was in good spirits and appeared to be feeling healthy and happy. Mr Barrow had never known Mr Stephenson to be depressed or suicidal. He last communicated with Mr Stephenson by email on the morning of 14 October 2014. Mr Stephenson's last email to Mr Barrow was sent at 11.51am, and did not indicate anything unusual.

16. An Australian Transport Safety Bureau (**ATSB**) website accessed on 9 April 2015, provided a summary of information relating to the collision on 14 October 2014. *Inter alia*, the website indicated that weather conditions at the time of the collision were reported to have included a moderate to strong southerly wind at 17kt, with some mid-level cloud in the area. Visibility was reported to have been greater than 10 kilometres.

View at Camp Street, Chelsea on 25 September 2015

17. On 25 September 2015, I attended the scene of the collision at Camp Street, Chelsea and other nearby locations with DS Dobson and a number of Court staff. I observed the well-populated nature of the vicinity, and the close proximity of the site to housing and playgrounds. I was left with the strong impression that the collision had come incredibly close to potentially endangering the lives of other people, and it was remarkable that nobody else was injured on 14 October 2014.

Australian Transport Safety Bureau Report

18. Following the incident, the ATSB conducted an investigation and issued a Final Transport Safety Report on 25 November 2016. Mr Stephenson was reported to hold a private pilot (aeroplane) licence, and had a total flying experience of 1,659 hours.

19. Testing of recovered parts of the Van's RV-6A aircraft did not indicate a failure of the components, including the engine. The ATSB identified that the liberation of items from the aircraft's interior indicated that the canopy likely opened in-flight. It was thought possible that Mr Stephenson was startled after the canopy opened, due to severe cockpit wind, noise and

debris flying about. However, the ATSB was unable to determine how the canopy opening would have affected aircraft control. A safety issue was identified regarding the potential for the in-flight opening of a tip-up, forward-hinged canopy to result in a significant pitch down tendency in Van's aircraft models that may affect aircraft control. The reason for the canopy opening in Mr Stephenson's aircraft could not be determined.

20. The ATSB reported that in response to Mr Stephenson's death, Van's Aircraft Incorporated have developed a service letter for distribution to builders and operators, highlighting the varying consequences of a canopy opening in-flight. Van's also advised the ATSB that its RV-12 and RV-14 models now have a 'canopy open' warning switch incorporated into the kit design. In addition, the ATSB has issued a safety advisory notice to all owners of Van's aircraft to highlight the findings of this investigation and advise operators to check the security of their aircraft's canopy prior to take-off.

21. In a separate report published in March 2013, the ATSB investigated the safety history of amateur-built aircraft in Australia through analysis of accident data held in ATSB's occurrence database from 1988 to 2010.[9] The ATSB found that amateur-built aircraft had an accident rate three times higher than comparable factory-built certified aircraft conducting similar flight operations in the same period. The fatal and serious injury accident rate was over five times higher in amateur-built aircraft.

Additional material from the Australian Transport Safety Bureau

22. By way of letter dated 18 January 2017, Senior Transport Safety Investigator (Aviation) at the ATSB Kerri Hughes, provided further information to the Court. The correspondence enclosed a Microsoft Excel spreadsheet, showing the occurrence of accidents, incidents and serious incidents within a 10 kilometre radius of Moorabbin Airport between 1 January 2006 and 31 December 2015. The data provided by the ATSB, indicated that a total of 26 accidents, 1111 incidents and 46 serious incidents had occurred during this period.[10]

---

[9] See: 'Amateur-built aircraft Part 2: Analysis of accidents involving VH-registered non-factory-built aeroplanes 1988-2010', available at: https://www.atsb.gov.au/publications/2007/ar-2007-043(2)/, accessed on 26 June 2017.

[10] An ATSB Transport Safety Report entitled Aviation Occurrence Statistics, was issued on 23 December 2015. The report's glossary indicated that the *Transport Safety Investigation Act 2003* provides that an *'accident'* is an occurrence where a person dies or suffers serious injury; the aircraft is destroyed, or is seriously damaged; any property is destroyed or serious damage. An *'incident'* is an occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation. A *'serious incident'* is an incident involving circumstances indicating that an accident nearly occurred.

Mention Hearing on 16 February 2017

23. Following the receipt of the coronial brief, the ATSB Transport Safety Report and the additional information from the ATSB, I determined to hold a mention hearing on 16 February 2017 to progress the investigation into Mr Stephenson's death. In particular, I sought to determine the extent of any issues relating to the position of Moorabbin Airport in what appeared to be an increasingly urbanised location.

24. In correspondence prior to the mention hearing, the ATSB referred the Court to the National Airports Safeguarding Framework, which aims *inter alia* to improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions.[11] It is the responsibility of each state and territory to implement the Framework into its planning system.

25. At the mention hearing, Manager of Litigation and Enforcement Joe Rule appeared on behalf of the Civil Aviation Safety Authority (**CASA**). I was advised by Counsel Assisting that Moorabbin Airport opened in December 1949,[12] and the demographics and population density of the surrounding areas have changed significantly since that time. It was submitted that given the ATSB's evidence that the fatal and serious injury accident rate is over five times higher in amateur-built aircraft, this may have implications for the increasingly urbanised, residential vicinity around Moorabbin Airport. I indicated at the hearing that I could not ignore the risk to public health and safety given the location of the incident; close to housing, playgrounds and a well-populated area.

26. Mr Rule advised the Court that there are a range of regulations that govern the building, certification and operation of amateur built, experimental aircraft. Mr Rule stated that CASA would provide the Court with an overview of how the regime works.

27. At the conclusion of the mention hearing, I expressed an intention to visit Moorabbin Airport. I also planned to contact the Victorian Department of Environment, Land, Water and Planning to enquire about the risk framework and assessments relating to Moorabbin Airport, and any actions taken to mitigate risks to the local community.

---

[11] See: https://infrastructure.gov.au/aviation/environmental/airport_safeguarding/nasf/

[12] See: http://www.moorabbinairport.com.au/corporate/history/timeline

Correspondence from the Civil Aviation Safety Authority

28. By way of letter dated 10 April 2017, Mr Rule provided additional material to the Court, including a statement made by CASA's Sport Aviation Technical Officer Michael Poole.

29. Mr Poole stated that CASA's policy regarding sport and recreational aviation activities is to encourage industry administration of those activities to the maximum extent practicable, without abrogating the responsibilities or functions imposed upon CASA by the *Civil Aviation Act 1988*. Administration of many sport and recreational flying activities has been delegated to recreational and sporting aviation organisations. Many of these organisations issue their own pilot certificates and ratings. Mr Poole stated that one such organisation is the SAAA. The *Civil Aviation Regulations 1988* provide that an 'experimental', amateur built aircraft such as Mr Stephenson's could only be used for limited operations, such as personal flying practice by the owner or flying training given in the aircraft to the owner. The operation of experimental aircraft in commercial operations is not permitted. Mr Poole confirmed that the responsibility for maintenance and ongoing airworthiness control of an experimental aircraft lies with the registered operator of the aircraft.

Correspondence from the Department of Environment, Land, Water and Planning

30. By way of letter dated 8 May 2017, the Court received information from Acting Deputy Secretary, Planning of the Department of Environment, Land, Water and Planning (DELWP) Lee Miezis.

31. Mr Miezis advised that Victoria has an established framework of planning policy and statutory protection for land within airport environs, and for the airports and airfields themselves, where they are not Commonwealth owned or leased. However, this planning system does not regulate aircraft safety or aircraft in flight, nor does Victoria's planning framework apply on Commonwealth land such as Moorabbin Airport.

32. Mr Miezis stated that the State Planning Policy Framework predates the National Airports Safeguarding Framework (NASF), but is consistent with NASF principles and associated guidelines addressing amenity, flight path and operational safety and efficiency. Mr Miezis stated that it is state planning policy to protect flight paths from inappropriate development and that land use planning decisions address potential safeguarding issues within the vicinity of

Moorabbin Airport. These issues include aircraft noise, prescribed airspace and flight path protection, appropriate land use, development and lot density.

33. Mr Miezis stated that Moorabbin Airport is located within the South East (Kingston) Green Wedge, which also provides significant protection from urban encroachment on the airport. Plan Melbourne 2017-2050, the state's metropolitan planning strategy, recognises Moorabbin Airport as state-significant infrastructure, which must be protected in the South East Green Wedge.

34. An attachment to Mr Miezis' letter indicated that planning tools such as Green Wedge Zone and Airport Environs Overlay discourage the introduction of sensitive uses, such as residential, schools, kindergartens and hospitals, within airport environs. In particular, it was advised that the Minister for Planning refused 'Amendment C111' to the Kingston Planning Scheme in January 2016, which had sought to rezone industrial land abutting Moorabbin Airport for residential purposes. The attachment also indicated that the current planning scheme controls for Moorabbin Airport do not extend to the Camp Street, Chelsea collision site of Mr Stephenson's aircraft.

View at Moorabbin Airport on 17 May 2017

35. On 17 May 2017 at approximately 10.30am, I visited Moorabbin Airport and met with Chief Executive Officer of the Moorabbin Airport Corporation Paul Ferguson. DS Dobson and a number of Court staff were also in attendance. Mr Ferguson gave a presentation, and emphasised that Moorabbin Airport itself is responsible for maintaining infrastructure, and is not involved in the regulation of aircrafts or pilots. Mr Ferguson was unable to provide information as to what would have been required from Air Services before Mr Stephenson took off on 14 October 2014.

COMMENTS

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

1. Coronial investigations relating to collisions involving 'experimental', amateur-built aircraft typically focus upon the adequacy of training and supervision of the pilot, and the role of CASA and the relevant recreational and sporting aviation organisation in regulating the activity. The investigation into Mr Stephenson's death has cast a spotlight upon specific events which occurred during his flying career, and a number of witnesses have provided varying accounts about his flying and aircraft construction capabilities. However, given Mr Stephenson was appropriately qualified at the time of the collision, and had contemporaneously received medical clearance to fly, I am satisfied that the supervision or regulation of amateur-built aircraft, is not a significant issue requiring further exploration in this case.

2. However, a key concern arising from this investigation has been the potential danger posed to the community by amateur-built aircraft flying over densely populated areas. The district surrounding Moorabbin Airport has changed dramatically since 1949, and I have viewed a number of maps which starkly convey the increasing urbanisation of the local vicinity. During my visit to the collision site on 25 September 2015, I observed the risk that had been posed to the densely populated Chelsea community, and the statistical improbability that nobody else was physically injured on 14 October 2014. Moorabbin Airport has a considerable amount of air traffic; it is consistently the third busiest airport in Australia, averaging 250,000 movements each year.[13] In this context, the potential ramifications of the use of amateur-built aircraft are especially concerning. The ATSB's evidence that amateur-built aircraft have an accident rate three times higher than comparable factory-built certified aircraft, and a fatal and serious injury accident rate over five times higher, is particularly relevant. The material provided by CASA emphasised that experimental aircraft may only be used for limited operations, such as personal flying practice by the owner; the operation of experimental aircraft in commercial operations is not permitted. However, problematically, in densely populated areas, the potential for injury is not limited to the pilot, it extends to the community on the ground, who have not made an informed decision to accept this risk.

---

[13] See: Moorabbin Airport, http://www.moorabbinairport.com.au/corporate/facts

FINDINGS

The investigation has identified that Mr Stephenson had recently received medical clearance to fly, and had been relaxed and in good spirits prior to his death.

The ATSB's investigation has indicated that the most likely cause of the collision on 14 October 2014, was the aircraft's canopy opening mid-flight. I am satisfied that the opening of the RV-6A aircraft's hatch was a significant contributing factor to the collision. Whether the opening of the canopy caused Mr Stephenson to have some form of medical event, in which he lost control of the aircraft, will remain undetermined. I acknowledge that remedial action has been taken by both Van's Aircraft Incorporated and the ATSB, to work towards preventing collisions from occurring in similar circumstances in the future. In light of these responses, I have determined it is not necessary for me to make any recommendations in this matter.

I accept and adopt the medical cause of death as identified by Dr Gregory Young and find that John Francis Stephenson died from multiple injuries sustained in an aviation incident as a pilot.

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:

Mrs Joyce Stephenson
Mr Joe Rule, Civil Aviation Safety Authority
Ms Kerri Hughes, Australian Transport Safety Bureau
Mr Lee Miezis, Acting Deputy Secretary, Department of Environment, Land, Water and Planning
Detective Sergeant Andrew Dobson

Signature:

AUDREY JAMIESON

CORONER

Date: **28 June 2017**