

IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2007 5264

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)

Section 67 of the Coroners Act 2008

I, JOHN OLLE, Coroner having investigated the death of EDWARD GELDARD

without holding an inquest:

find that the identity of the deceased was EDWARD GELDARD

born on 21 July 1961

and the death occurred on 29 December 2007

at Port Melbourne

from:

1a. INJURIES SUSTAINED IN HELICOPTER ACCIDENT

Pursuant to Section 67(2) of the *Coroners Act 2008*, I make these findings with respect to the following circumstances:

1. Mr Edward Geldard was born on 21 July 1961. He was 46 years old at the time of his death and is survived by his wife, Ms Laurel Sinclair. Mr Geldard was a helicopter pilot and company owner of "Aussie Copters", which operated out of Caribbean Gardens in Scoresby. He owned and flew a Robinson R44 four seater helicopter, which he used to take passengers on scenic charter flights over Port Melbourne. Mr Geldard had been an experienced pilot, licensed since 1989 with 776 total hours flying experience.¹
2. A brief was provided by Victoria Police to this Court. It comprised statements obtained from his colleague, witnesses and investigating officers and submissions by Mr Geldard's father, David Geldard. An extensive investigation was undertaken by the Australian Transport

¹ Mr Geldard's logbook was last updated on 21 December 2007. Calculations included hours from the helicopter's maintenance release to derive the total flying hours.

Safety Bureau ('ATSB') and a copy of their report was provided to the Coroner.² I have drawn on all of this material as to the factual matters in this finding.

3. At approximately 7.05pm on 29 December 2007, following completion of a scenic charter flight, a Robinson Helicopter Company R44 Raven 1, registered VH-MEB, departed the Pier 35 private helipad, located adjacent to the Yarra River, Melbourne. The helicopter was intended to undertake a private flight to return to the operator's base. Mr Geldard and Mr James Reiss were the two pilots onboard.
4. Weather conditions were fine and clear; wind speed ranged from 18 to a maximum of 25 kts with wind direction from the south-south west.³ One witness at the marina reported that there was a blustery southerly wind coming from the left at about 15-22 kts with gusts of about 30 kts.⁴ The ambient temperature was approximately 22 degrees Celsius.
5. Witnesses located at a nearby marina reported that shortly after the helicopter's takeoff in a north-north-westerly direction, it banked left and turned to the south-west, passing a marina while at a height of about 30 to 35 ft above mean sea level. Witnesses reported that during the takeoff the helicopter passed to the west of a channel marker in the river adjacent to the pad. During the departure from the pad on previous flights the helicopter had passed to the east of the channel marker.
6. The helicopter's forward airspeed decreased and it 'rocked or wobbled in the air' then pitched nose up, rolled to the left, descended and impacted the water. Mr Reiss, the handling pilot, exited the helicopter via the right side and was recovered by the crew of a nearby boat. Mr Geldard, the chief pilot, did not exit the helicopter and was fatally injured.
7. The investigation found that the helicopter did not gain altitude, departed controlled flight, descended and struck the water. During this event, the main rotor revolutions per minute (RPM) were at a lower than normal value to sustain controlled flight. Mr Reiss reported in his statement that the low main rotor RPM audio horn and caution light activated.⁵ The investigation could not identify any problems with the helicopter, its systems or engine, which would have led to the low main rotor RPM as witnessed. The investigation

² ATSB Transport Safety Report: Aviation Occurrence Investigation – AO-2007-069 Final; Collision with water, Pier 35 Melbourne VIC, 29 December 2007 VH-MEB Robinson Helicopter Company R44 Raven I, Australian Transport Safety Bureau, Australian Government.

³ At about 6.36pm, the time of the scenic flight conducted prior to the accident flight, the West Gate Bridge weather observations were recorded as wind speed from 38 to a maximum of 40 kts.

⁴ ATSB Transport Safety Report, above n 2, 12.

⁵ Statement of James Reiss, dated 29 December 2007, 2.

determined that environmental factors, in combination with pilot handling technique probably resulted in the low main rotor RPM event.

8. Following the accident, the helipad operator ceased all helicopter operations at Pier 35 and any on-going use of that pad by any person. It has since re-commenced operation by Melbourne Helicopters.
9. An autopsy and report was undertaken by Dr Shelley Robertson, Senior Forensic Pathologist at the Victorian Institute of Forensic Medicine. Dr Robertson notes that there were head and spinal injuries with diffuse brain injury and upper cervical spine injury. She further notes that Mr Geldard experienced chest injuries with multiple rib and sternal fractures, and that no significant natural disease was identified. Dr Robertson reported that the nature and severity of the injuries were such that death would have supervened rapidly following impact with water. She concluded that cause of death was injuries sustained in a helicopter accident.
10. Toxicological analysis of post-mortem samples identified that ethanol and drugs were not detected in the toxicological analysis.
11. I am satisfied having considered all of the evidence before me that no further investigation is required. I am satisfied that there were no suspicious circumstances and that Mr Geldard did not intentionally take his own life. Recommendations made by the ATSB have been responded to by the helipad operator, Heli Air Pty Ltd.⁶
12. I find that Mr Edward Geldard died on 29 December 2007 and that the cause of his death was injuries sustained in a helicopter accident.

HELIPAD DESIGN

13. ATSB reported that the environs of Pier 35 helipad result in wind from the south-south-west being deflected over the Pier 35 boat storage shed. On the opposite side of the shed, turbulence or eddies could exist which can have a negative effect on the performance of any light helicopter flown in those conditions. ATSB reported that pilots who frequently used the helipad in these conditions 'completed a risk analysis and adopted procedures to use a towering takeoff to the south in these conditions rather than risk possible flight in the turbulence produced by the boat storage shed.'⁷

⁶ See ATSB Transport Safety Report, above n 2, 34.

⁷ Ibid 28.

14. ATSB also reported that another privately owned and operated R44 helicopter was permanently based at the Pier 35 helipad and that the pilots of that helicopter reported that in a southerly wind, they performed a 'towering takeoff' and departed to the south over the powerlines rather than take off with a tailwind over the river.⁸

SUBMISSIONS BY MR DAVID GELDARD

15. Mr David Geldard forwarded submissions to this Court for the ATSB to make comments. These submissions were very helpful and well-considered, and I commend Mr Geldard for his unwavering commitment to ensuring the safety of Pier 35 helipad. On 16 August 2013, the ATSB responded to Mr Geldard's submissions. I wish to address two submissions in particular.

The use of towering takeoffs at Pier 35

16. Mr Geldard submitted that the ATSB, CASA and Melbourne Helicopters condone the use of towering takeoffs and that Robinson Helicopter Company recommended that it should be avoided for safety reasons. Mr Geldard does not accept that towering takeoffs are acceptable.
17. The ATSB, in their response to Mr Geldard's submissions, emphasised that they do not have a role 'condoning' a particular type of takeoff, but reported that they are not prohibited and are not beyond the operating limitations of a Robinson 44 helicopter in the right conditions. ATSB reported that 'provided the risks of a towering takeoff could be managed safely by the pilot, such a takeoff may have been used to clear the objects to the south of the helipad at Pier 35 to avoid the potentially higher risks of a takeoff with a tail wind,'⁹ as Mr Geldard's helicopter is likely to have experienced on 29 December 2007. ATSB further stated that 'if a HLS register with an information sheet noting any pertinent information concerning the Pier 35 helipad was available to him, he may have considered using a towering takeoff,'¹⁰ due to the helipad's unique characteristics.
18. Mr Geldard reported that CASA senior managers, Mr Max McGregor and Mr Gerard Campbell, in a videoconference on 5 October 2010, promoted the idea that towering takeoffs are acceptable. He also submitted that by Melbourne Helicopters operating procedures stating under 'departures' that 'steep departures should be considered before

⁸ ATSB Transport Safety Report, above n 2, 7.

⁹ ATSB response to Mr David Geldard's submissions, dated 16 August 2013, 2.

¹⁰ ATSB Transport Safety Report, above n 2, 29.

departing over water' that they are condoning towering takeoffs. Mr Geldard also submitted that Robinson Helicopter Company advises against vertical takeoffs and specifically advises the use of a safe takeoff path described in their R44 Height-Velocity diagram.

CASA regulations

19. Mr Geldard submitted that CASA will not close down a helipad unless it can be demonstrated to contravene a specific CASA regulation.
20. The ATSB reported that the windsock may provide false or incorrect indications of the local wind in some conditions, due to its location on the helipad.¹¹ The safety bureau reported that:

The helipad windsock did not conform with the guidance provided in Civil Aviation Advisory Publication (CAAP) 92-2-(1) – *Guidance for the establishment and use of helicopter landing sites (HLS)*, as its location meant that it gave inaccurate indications of wind when significant wind occurred from the south-south-west direction. That could lead to an incorrect perception by a pilot of the actual wind direction and strength, and to subsequent incorrect operation of the helicopter.¹²

21. The ATSB reported that the design of the helipad was not in accordance with *International Civil Aviation Organisation (ICAO) International Standards and Recommended Practices*. At page 19 of their report, they cited Annex 14 – *Aerodromes Vol II Heliports (2nd edition – July 1995)* which, in relation to the location of helicopter landing sites windsocks stated:

A wind direction indicator shall be located so as to indicate the wind conditions over the final approach and the take-off area **and in such a way so as to be free from the effect of airflow disturbances caused by nearby objects** or rotor downwash...Where a touchdown and lift off area may be subject to a disturbed flow, then additional wind direction indicators located close to the area should be provided to indicate the surface wind on the area.¹³
(emphasis added)

¹¹ Ibid 34.

¹² ATSB Transport Safety Report, above n 2, 28.

¹³ Ibid 19.

PIER 35 HELIPAD: CURRENT OPERATING PROCEDURES

22. Melbourne Helicopter Co has incorporated the following National Transport Safety Board (NTSB) safety recommendations from the 2007 accident to improve safety at Pier 35 helipad:¹⁴

- i. Relocation of the windsock. Two windsocks have now been installed/repositioned at Pier 35, which identify winds coming from the south-south-west behind the boat storage shed.
- ii. Joy-flight operations at Pier 35 will be cancelled if the forecast on YMML (Melbourne) is equal to or exceeds 2- knots from the south-south-west.
- iii. Obstacles¹⁵ at Pier 35 are displayed on the attached helipad Chart for Pier 35.
- iv. Steep departures should be considered before departing over water.
- v. Unauthorised access is not permitted and will incur a landing fee of \$300.
- vi. Authorised access will only be available to aircraft operators once certain procedures are completed.¹⁶

COMMENTS

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

1. In relation to the use of towered takeoffs at Pier 35, I accept the submissions made by the ATSB, that provided the risks of a towered takeoff could be managed safely by the pilot, such a takeoff may be used to clear the objects to the south of the helipad at Pier 35 to avoid the potentially higher risks of a takeoff with a tail wind. Pier 35 is a unique helipad. Accordingly, in this specific circumstance, it may be beneficial to implement towered takeoffs in certain conditions, to avoid higher risks associated with a tail wind. However, this should only be done in circumstances where pertinent information concerning the unique characteristics of the Pier 35 helipad are known to the pilot.

¹⁴ Please note that these are not all the current operating procedures in place at Pier 35 helipad.

¹⁵ Including bird life; passing vessels; Port of Melbourne Authority control tower; Channel Marker pole in water; Low fence along HLS northern/rivers edge; Telegraph pole; and power lines.

¹⁶ Which include that the operational pilots for an aircraft are: to be familiar with the ATSB report AO-2007-069; to have been approved for operations into Pier 35 by their chief pilot, or completed a Pier 35 check ride with MH; and received and read a copy of this document.

RECOMMENDATIONS

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

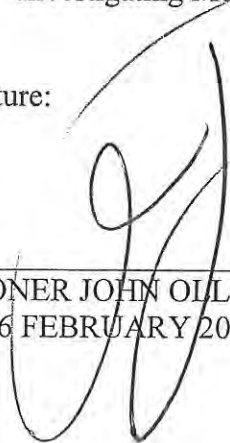
I recommend that Melbourne Helicopter Co:

1. Place signage at Pier 35 helipad in relation to its unique characteristics. For example, the sign could warn that wind from the south-south-west may be deflected over the Pier 35 boat storage shed. This signage may assist in heightening awareness as to the possibility of turbulence or eddies existing on the opposite of the boat shed, so that pilots can complete a risk analysis and adopt procedures to assist the performance of the helicopter in those conditions.

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

The family of Edward Geldard;
Interested parties;
Melbourne Helicopters; and
Investigating Member, Victoria Police.

Signature:



CORONER JOHN OLLE
Date: 6 FEBRUARY 2014

