

SHERIFFDOM OF GRAMPIAN, HIGHLAND AND ISLANDS AT DORNOCH

**UNDER THE FATAL ACCIDENTS AND SUDDEN DEATHS INQUIRY
(SCOTLAND) ACT 1976**

DETERMINATION

By

Sheriff David Oman Sutherland

**Sheriff of Grampian, Highland and
Islands**

At Dornoch

In

FATAL ACCIDENT INQUIRY

into the death of

TIMOTHY ANDREW PETER COOK

DORNOCH, 6th March 2007

The Sheriff, having considered all the evidence adduced, Determines in terms of Section 6(1) of The Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976:

1. That Timothy Andrew Peter Cook, aged 35, died at approximately 11.35am on 22nd October 2004 at Meall Feith na Slataich, the broad mountain ridge 37 miles north west of Inverness, en route from Stornoway Airport to Inverness Airport.
2. That his death was caused by multiple injuries following an aircraft accident.
3. That there was no reasonable precaution whereby death might have been avoided.

4. That there were no defects in any of the systems of working which contributed to his death.
5. That consideration should be given to fitting airborne flight data and cockpit voice recording equipment on all commercial air transport.
6. That recordings be made of all military radar returns for analysis by the Department for Transport Air Accidents Investigation Branch.

Evidence was led orally or by affidavit from the following witnesses by Mr Ian Smith, Procurator Fiscal Depute, Inverness.

1. Dr. Mark Ashton, Consultant Pathologist, Raigmore Hospital, Inverness.
2. Craig Williamson, Operations Officer, Highland Airways, Inverness.
3. Allan Mossman, Managing Director, Highland Airways, Inverness.
4. Sarah Ann Lister, Personnel Manager, Highland Airways, Inverness.
5. David Butt, Quality Manager, Highland Airways, Inverness.
6. Peter Henk, Aircraft Handler, Highland Airways, Stornoway.
7. James Britton, Air Traffic Control Officer, Stornoway.
8. Graham John Black, Air Traffic Control Officer, Scottish Air Traffic Control Centre, Prestwick.
9. David Nevins, RAF Air Traffic Controller, Lossiemouth.
10. Ian John MacDonell, formerly head of Air Traffic Services Investigation, Scottish Oceanic Control Centre, Prestwick (now retired).
11. Donald MacRae, Stalker.
12. David Neville, Hostel owner.
13. P.C. Sheila Slaughter, Northern Constabulary.
14. Philip Taylor, Senior Inspector (Operations) Air Accidents Investigation Branch, Aldershot.
15. Peter Wivell, Senior Inspector (Radar) Air Accidents Investigation Branch, Aldershot.
16. Andrew Robinson, Senior Inspector (Engineering) Air Accidents Investigation Branch, Aldershot.

NOTE

- [1] On 7th and 8th November 2006 I heard evidence into the circumstances surrounding the death of Timothy Andrew Peter Cook who was employed as a pilot with Highland Airways based at Inverness, flying both Jet Stream 31 and Rheims Aviation F405 Caravan 2 (Cessna).
- [2] Mr Cook was issued with a UK commercial pilot's licence in March 2001 and joined Highland Airways on a full time basis in June 2002. In August 2004 he successfully completed a selection procedure and was due to start work with EasyJet as a pilot in November 2004.
- [3] Mr Cook, who had invested a considerable amount of his own money into preparing for his new career flying jets with EasyJet, was looking forward to a new chapter in his flying career and was also looking forward to spending a holiday in Dubai with his fiancée prior to taking up this appointment. Mr Cook was described by his colleagues as conscientious, respected and was clearly a well liked pilot who had an exciting and promising career ahead of him. He was particularly known for adhering to standard operating procedures and for being safety conscious. He was a skilful and experienced pilot, properly qualified, medically fit and enjoying his role as a pilot with Highland Airways.
- [4] On Friday 22nd October 2004 Mr Cook arrived at Inverness Airport to commence his preparations for flying the 406 (Cessna) to Kirkwall, then Sumburgh, then back to Inverness then on to Stornoway, finally returning to Inverness. He travelled to Kirkwall and then Sumburgh returning to Inverness about 10.00am. He left Inverness about 10.20am arriving in Stornoway at approximately 11.00am. There he helped the aircraft handler, Peter Henk, to unload newspapers and appeared to be in a jovial mood and was clearly looking forward to his new life and his new job. His departure from Stornoway was described as eye-catching in that having lifted off he flew along the runway approximately 50 feet above the runway before pulling up at the end of the runway at about a 70° angle in his climb. While this was

certainly not standard procedure as Mr Taylor of the Air Accidents Investigation Branch noted, it would not have been the first time that a pilot performed an eye-catching departure in an empty light aircraft and one has to be reminded that this was Mr Cook's final flight out of Stornoway and he was saying goodbye to colleagues at that airport. He was not interfering with any other traffic, there was no danger to the aircraft and anything he did was perfectly within the capabilities of the plane and himself as an experienced pilot.

- [5] The climb and cruise at 9,000 feet seems to have been unremarkable and Mr Cook's radio calls were described as lucid and calm.

- [6] Once the plane was handed over from Stornoway Air Traffic Control it was taken over by the Scottish Air Traffic Control centre at Prestwick. Mr Cook's aircraft (call sign HWY 4 Echo) was traced on primary and secondary radar by the centre at Prestwick before being handed over to Air Traffic Control at R.A.F. Lossiemouth. The handover was described as a "silent handover" and the plane came in to Lossiemouth radar at 11.20am with an altitude of 9,500 feet. Mr Nevins of R.A.F. Lossiemouth described the flight path as what he would have expected and made radio contact with Mr Cook. Mr Cook requested permission to descent from 9,500 feet to 7,500 feet. Having made radio contact with Mr Cook, Mr Nevins monitored the rate of descent which appeared normal. At 11.33am radar contact was lost and although it is not uncommon to lose an aircraft on one sweep of the radar (radar sweeps every 8 seconds) no further radar contact was made and Mr Nevins endeavoured to make radio contact with Mr Cook but to no avail. The last sweep of the radar showed 7,800 and Mr Nevins continued for 20 minutes trying to raise Mr Cook on his radio.

- [7] Examination of the radar records from Air Traffic Control at Prestwick showed that the last trace obtained from Stornoway and Tiree radars showed a descent from 8,100 feet to 7,800 feet in 8.6 seconds which was faster than the normal rate of descent.

- [8] Evidence was then heard from Philip Taylor, Senior Inspector specialising in operations at the Air Traffic Accidents Investigation Branch in Aldershot together with his two colleagues, Peter Wivell, Senior Inspector specialising in radar, and Andrew Robinson, Senior Inspector specialising in engineering. As well as having examined in great detail the circumstances of the accident these three experts had the benefit of being in court and listening to all the evidence led at the fatal accident inquiry.
- [9] Mr Taylor described how he had arrived at the locus on the Sunday following the accident and had walked over the site before commencing his examination. He obtained the recordings from the Prestwick radar and from Lossiemouth radio and met the manufacturers of the Cessna to see if anything had gone wrong with the aircraft. He had spoken to the pilot who had been flying some 25 minutes behind Mr Cook's aircraft and was able to satisfy himself that there had been no severe atmospheric conditions. His examination of all the circumstances revealed nothing eventful in the flight or in the radio communication and his detailed investigation of the circumstances indicated that Mr Cook was a skilful pilot, properly qualified and medically fit who was considered conscientious and was well respected by all his colleagues and who had an exciting future ahead of him.
- [10] He did speak of an electric elevator trim being near its full nose-down extent and while unable to explain why this should be, one possible reason for that and indeed a plausible cause for the accident could have been that Mr Cook was affected by a sudden mental or physical incapacitation that had manifested itself in an involuntary movement. Mr Cook was some 6' 4" tall and there was possibly a 2" clearance between the top of his head and the stringer which supported the roof of the aircraft and Mr Cook might have hit his head causing momentary loss of control.
- [11] In his examination of the radar systems, Peter Wivell recovered data from Stornoway and Tiree radars and reviewed notes from an observer of a display of Kinloss and Lossiemouth radars. Neither the Kinloss or Lossiemouth radars were recorded. Nothing unusual was noticed until a disturbance in the

descent at 8,200 feet. The last radar return was observed by Stornoway secondary radar at 11.31 showing 7,200 feet. The fact that the aircraft impacted on the ground nearly 5,000 below the last recorded aircraft altitude indicated that the aircraft was going down much faster than it was moving horizontally and the orientation of the wreckage indicated significant turning during the descent after the loss of radar track. The radar data indicated a rapid and powered altitude loss possibly in conjunction with the loss of transponder functionality.

- [12] Mr Andrew Robinson, Senior Inspector (Engineering) of the Air Accidents Investigation Branch, Aldershot, spoke of examining the locus and recovering the wreckage for examination at the AAIB's hangar at Farnborough. His investigation concluded that the aircraft had entered a dramatic and sustained manoeuvre from what was apparently a controlled flight at normal descent speed. However there was insufficient evidence to establish the causal factors that had led to this event. He was, however, able to state that there was no evidence of a pre-impact fire or explosion and the possibility of an in-flight structural failure was eliminated by the fact that all the extremities of the aircraft were accounted for. Investigation of the propeller hubs revealed that the aircraft struck the ground with both propellers at similar pitch angles indicating that symmetrical engine power had been applied and the evidence also suggested that the engines were developing a significant amount of power at impact. The two elevator trim actuators were found close to their full aircraft nose-down positions and there was no logical reason for the pilot to have moved the trim to this setting.
- [13] Mr Robinson's examination of the relevant data relating to the aircraft indicated that the aircraft, in his words, seemed to be "running like a sewing machine" and there was nothing to suggest any malfunction in any part of the aircraft. He estimated that the impact speed of the aircraft had been somewhere around 400 knots.
- [14] This tragic accident has no proven explanation. Whilst I am indebted to the three inspectors of the Air Accidents Investigation Branch of the Department

of Transport for their thorough and painstaking investigation of the accident nonetheless it is clear that their enquiries were hindered by the fact that aircraft such as the Cessna flown by Mr Cook was not fitted with flight data and voice recording equipment which would have been invaluable in their investigation. Similarly while they were able to analyse radar returns from Scottish Air Traffic Control at Prestwick this was not available from Lossiemouth or Kinloss given that there are no recordings of military radar returns. Given that much of the north of Scotland's civilian radar cover is provided by the R.A.F. and that all investigations of both civilian and military accidents are carried out by the Department of Transport Air Accidents Investigation Branch it seems strange that no such recordings are kept and in my view would have been invaluable for the analysis by the inspectors.

[15] It is clear however that this was a tragic but unexplained accident. As above indicated Mr Cook was an extremely competent pilot, well regarded by his peers with a very happy private life and an exciting professional career ahead of him. I do not consider that there was any evidence before me which amounted to any lack of care on the part of Highland Airways in the preparation and maintenance of its aircraft nor was there any suggestion of fault on the part of Mr Cook.

[16] Both Mr Cook's parents and his fiancée attended the inquiry and everyone was impressed with their fortitude and dignity and I would like to extend our sympathies to them in their tragic loss.