



PRELIMINARY REPORT

AIC 22-2002

Hevilift PNG Aviation Limited PNG & MAF PNG

P2-KSI & P2-MEW

Twin Otter DHC-6-300 & Cessna 208 Caravan

Loss of Separation

Mt Hagen Airport, Western Highlands

Papua New Guinea

26 August 2022

About the AIC

The Accident Investigation Commission (AIC) is an independent statutory agency within Papua New Guinea (PNG). The AIC is governed by a Commission and is entirely separate from the judiciary, transport regulators, policy makers and service providers. The AIC's function is to improve safety and public confidence in the aviation mode of transport through excellence in: independent investigation of aviation accidents and other safety occurrences within the aviation system; safety data recording and analysis; and fostering safety awareness, knowledge and action.

The AIC is responsible for investigating accidents and other transport safety matters involving civil aviation in PNG, as well as participating in overseas investigations involving PNG registered aircraft. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The AIC performs its functions in accordance with the provisions of the *PNG Civil Aviation Act 2000 (as amended)*, and the *Commissions of Inquiry Act 1951* and *Annex 13* to the *Convention on International Civil Aviation*.

The object of a safety investigation is to identify and reduce safety-related risk. AIC investigations determine and communicate the safety factors related to the transport safety matter being investigated.

On 30 August 2022 at 09:33am local time, AIC was notified by CASA PNG via email, of an occurrence occurred on 26 August 2022, involving a Twin Otter DHC-6-300 aircraft, registered P2-KSI owned and operated by Hevilift PNG Aviation Limited and a Cessna 208 Caravan aircraft, registered P2-MEW owned and operated by MAF PNG at Mt Hagen Airport, Western Highlands Province. The AIC immediately gathered information regarding the occurrence and commenced the investigation.

This Preliminary Aircraft Serious Incident Investigation Report was produced by the AIC, and contains facts known to the AIC before the official release date. It is developed by the Commission in accordance with Para 7.1 of *ICAO Annex 13*. The report is also published on the AIC website: www.aic.gov.pg.

The report is based on the initial investigation activities carried out by the AIC in accordance with *Papua New Guinea Civil Aviation Act 2000 (as amended)*, *Chapter 31* of the *Commissions of Inquiry Act*, *Annex 13* to the *Convention on International Civil Aviation*, and the *PNG AIC Investigation Policy and Procedures Manual*. It contains factual information. Analysis of that information, findings and contributing (causal) factors, other factors, safety actions, and safety recommendations are reserved for the *Final Report*.

The sole objective of the investigation and the Preliminary Report is the AIC's obligation to the *Convention on International Civil Aviation* and in accordance with *ICAO Annex 13*, and thereby promote aviation safety. (Reference: *ICAO Annex 13, Chapter 7*). Readers are advised that in accordance with *Section 219* of the *Civil Aviation Act 2000 (as amended)* and *Annex 13*, it is not the purpose of the Commission's aircraft accident/serious incident investigation to apportion blame or liability. Fact based statements in the report should not be interpreted as apportioning blame. Consequently, AIC reports are confined to matters of safety significance and may be misleading if used for any other purpose.



Captain Aria Bouraga, MBE

Acting Chief Commissioner

25 September 2022

Loss of Separation

Occurrence Details

On 26 August 2022, at about 8:26 local (22:26 UTC¹) a Twin Otter DHC6-300 aircraft, registered P2-KSI owned and operated by Hevilift PNG Aviation Limited and a Cessna 208 Caravan aircraft, registered P2-MEW owned and operated by Mission Aviation Fellowship (MAF) PNG Limited encountered a loss of separation when they passed each other at Mt Hagen Airport, Western Highlands Province, Papua New Guinea.

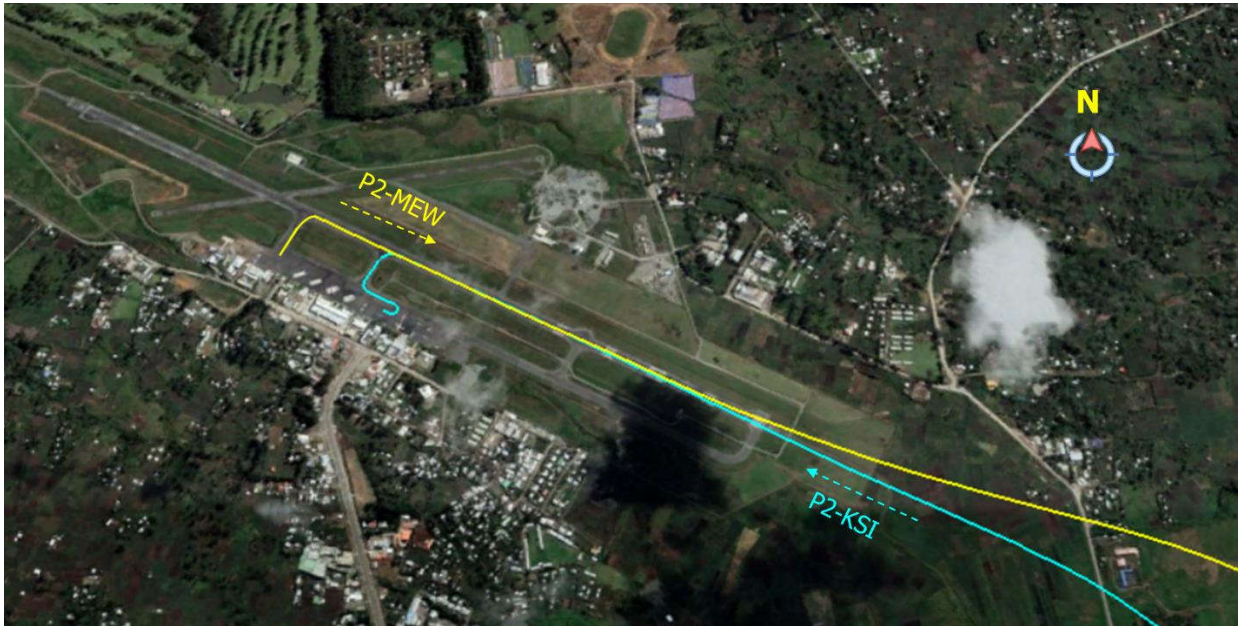


Figure 1: Depiction of the aircraft flight paths

P2-KSI was conducting an IFR² charter flight from Kairik Airport, Enga Province to Mt Hagen Airport while P2-MEW was conducting a VFR³ charter flight from Mt Hagen Airport to Simbai Airstrip, Madang Province.

According to ATS⁴, P2-KSI departed Kairik at 07:53, climbed to an altitude of 11,000 ft AMSL⁵ and began tracking south-east for Mt. Hagen with an estimated time of arrival at 8:26.

At 08:13 P2-MEW requested for taxi via taxiway Alpha for Runway 12 and was subsequently cleared by ATC for taxi. At 08:16, P2-MEW reported ready for takeoff and was instructed by ATC⁶ to hold at the holding point due to inbound traffic⁷. At 08:18, P2-KSI reported to ATC that they were 14 nautical miles to Hagen via Tomba Area and were passing through 10,000 ft AMSL.

At 08:23, P2-KSI reported to ATC that they were wide left-downwind for Runway 30 and was subsequently instructed by ATC to continue approach for Runway 30, the duty Runway. A few seconds later, P2-MEW requested for an intersection departure on Runway 12, the opposite Runway, if available.

¹ The 24-hour clock, in Coordinated Universal Time (UTC), is used in this report to describe the local time as specific events occurred. Local time in the area of the serious incident, Papua New Guinea (Pacific/Port Moresby Time) is UTC +10 hours.

² Instrument Flight Rules

³ Visual Flight Rules

⁴ Air Traffic Services

⁵ Above Mean Sea Level

⁶ Air Traffic Control

⁷ The traffic, P2-KSO and P2-KSI

At 08:24, ATC issued line up clearance to P2-MEW on Runway 12 intersection Alpha and instantly advised P2-KSI that P2-MEW was lining up for take-off on Runway 12 intersection for a left turn via the Tremaerne Gap on climb 9,000 ft. A few seconds later, P2-MEW reported ready on line up and subsequently was cleared for takeoff.

The pilot of P2-MEW stated during interview that the aircraft was manoeuvred slightly to the left to avoid cloud prior to making the left turn, as instructed by ATC. According to both aircraft recorded data⁸, at the time P2-MEW initiated the left manoeuvring, P2-KSI was already established on finals for Runway 30.

At 08:25, while P2-MEW was on takeoff phase, ATC cleared P2-KSI for landing on Runway 12 and not Runway 30. A few seconds later, at about 0.5 nm from the Runway 30 threshold, the aircraft passed each other at a proximity of about 300ft vertical distance apart and about 200m lateral distance apart.

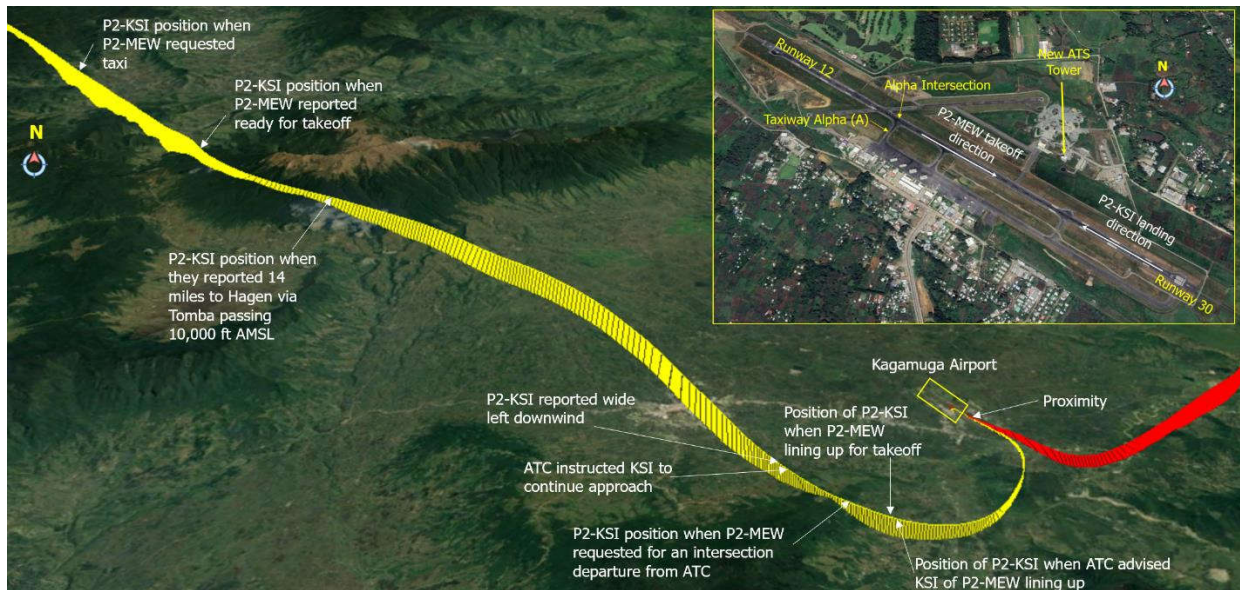


Figure 2: Flight paths with significant events

At 08:26, P2-KSI alerted ATC of the proximity they encountered with P2-MEW as they continued the flight and subsequently landed at Mt. Hagen Airport while P2-MEW continued the flight to Simbai Airstrip.

⁸ Data recorded by P2-MEW Garmin G1000 and P2-KSI Appareo V1000

AIC comment

The investigation is continuing and will include but not limited to air traffic control, flight operations, weather, and organizational aspects, to the appropriate extent.

The investigation analysis and findings will be included in the Final Report.

Safety Actions

At the time of the issue of this Preliminary report, no safety actions had been taken.

Recommendations

At the time of the issue of this Preliminary Report, no Recommendation had been made by the PNG AIC.

General Details

Date and time	26 August 2022, 8:25 (22:25 UTC)	
Occurrence category	Serious Incident	
Primary occurrence type	Loss of Separation	
Location	Mt. Hagen Airport	
	Latitude: S 5°49'40.08"	E 144° 17' 58.26"
Elevation	5387ft	
Runway Direction	12/30	
Length	2190m	
Width	30m	
Slope	0.64% down to SE	

Type of Operation

P2-KSI		
Type of Operation	IFR, Charter flight	
Persons on board	Pilot: 2	Passengers: 13
P2-MEW		
Type of Operation	VFR, Charter flight	
Persons on board	Pilot: 1	Passengers: Nil

Crew details

P2-KSI		
	Pilot in Command	Co-pilot
Gender	Male	Female
Age	74	26
Nationality	Australian	Australian
Licence type	ATPL (Aeroplane)	CPL (Aeroplane)
Total hours	25,043.9	2,357
Total hours in Command	19,990	2,079.3
Total hours on type	1,0158.9	70
P2-MEW		
	Pilot in Command	
Gender	Female	
Age	42	
Nationality	New Zealander	
Licence type	CPL (Aerospace)	
Total hours	1,316.4	
Total hours in Command	840.1	
Total hours on type	217.4	

Aircraft Details

Aircraft

P2-KSI	
Aircraft manufacturer	Viking Air Limited
Aircraft Model	DHC-6-300
Registration	P2-KSI
Serial number	706
Year of manufacture	1980
Total hours since new	27,092.96
Total cycles since new	42,860
P2-MEW	
Aircraft manufacturer	Textron Aviation Inc.
Aircraft Model	Cessna 208 Caravan
Registration	P2-MEW
Serial number	20800617
Year of manufacture	2018
Total hours since new	1626.1

Total cycles since new	3019
------------------------	------

Engine

P2-KSI		
	Engine 1	Engine 2
Engine manufacturer	Pratt & Witney Canada	Pratt & Witney Canada
Engine Model	PT6A	PT6A
Engine Type	PT6A-27	PT6A-27
Serial number	PCE-40070	PCE-PG0156
Total Time since new	12,475.12	13,131.44
Total cycles since new	13,486	18,631
Total time since overhaul	4,122.85	7,664.96
P2-MEW		
Engine manufacturer	Pratt & Witney Canada	
Engine Model	PT6A	
Engine Type	PT6A-114A	
Serial number	PCE-PC2291	
Total Time since new	1,626.1	
Total cycles since new	2,858	
Total time since overhaul	0	

Propeller

P2-KSI		
	Propeller 1	Propeller 2
Manufacturer	Hartzell	Hartzell
Model	HC-B3TN-3D	HC-B3TN-3D
Serial number	BUA-19786	BUA-22938
Total time since overhaul	696.6	909.01
P2-MEW		
Manufacturer	McCauley Propeller System	
Model	3GFR34C703-B/B-106GA-0	
Serial Number	180187	
Hours since Overhaul	1,626.1	