



INTERIM FACTUAL REPORT

AIC 19-1003

TRIBAL AURORA HELICOPTERS

P2-TAH

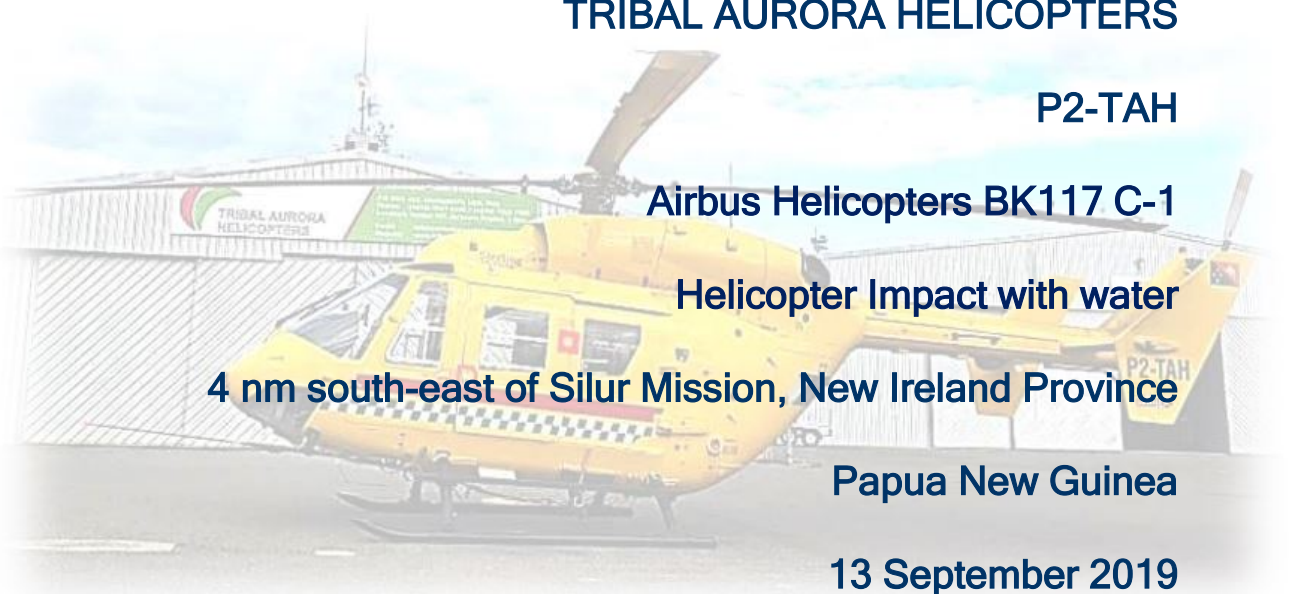
Airbus Helicopters BK117 C-1

Helicopter Impact with water

4 nm south-east of Silur Mission, New Ireland Province

Papua New Guinea

13 September 2019



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 to the whole aviation system. AIC investigations determine and communicate the safety factors related to the transport safety matter being investigated.

At 02:27 UTC (12:27 local time) on the 13th September 2019, an Operator notified the AIC of the overdue arrival at Tokua of a BK117 C-1 helicopter, registered P2-TAH, operated by Tribal Aurora Helicopters. At 04:31 UTC (14:31 local), PNG Air Services Limited (ASL) notified the AIC of the unreported arrival of P2-TAH at Tokua Airport by sending the AIC an Initial Notification of Incidents (INI) report. AIC immediately commenced an investigation

This *Interim Factual Report* was produced by the AIC, PO Box 1709, Boroko 111, NCD, Papua New Guinea. It is publicly released by the Commission and is published on the AIC website: www.aic.gov.pg.

The *Interim Factual Report* is based on the investigation carried out by the AIC to date in accordance with *Papua New Guinea Civil Aviation Act 2000 (as Amended)*, *Chapter 31* of the *Commissions of Inquiry Act 1951*, *Annex 13* to the *Convention on International Civil Aviation*, and the *PNG AIC Investigation Policy and Procedures Manual*. The *Interim Factual Report* is based on the investigation carried out by the AIC to date 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*. Safety actions have not been taken, and safety recommendations have not issued at the time of issuing this *Interim Factual Report*.

The sole objective of the investigation and the *Interim Factual Report* is in accordance with the AIC's obligation on behalf of PNG as a Signatory State to the *Convention on International Civil Aviation* and in accordance with *Annex 13* to that *Convention*, thereby promoting 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 *Paragraph 3.1* of *Annex 13*, it is not the purpose of the Commission's aircraft accident investigations 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.



Hubert Namani, LLB
Chief Commissioner

Date: 7th October 2019

Airbus Helicopters BK117 C-1 helicopter impact with water

Occurrence Details

On 13th September 2019, at about 00:15 UTC¹ (10:15 local time), an Airbus Helicopters BK117 C-1 helicopter, registered P2-TAH (TAH), operated by Tribal Aurora Helicopters departed from Buka Airport, Autonomous Region of Bougainville for the planned destination Tokua Airport, East New Britain. The planned estimated time of arrival at Tokua Airport was 01:25.

At 00:45 the pilot made a routine report to Air Traffic Services that his operations were normal, below 5,000 ft and he was estimating Tokua at 01:25. The helicopter failed to arrive at Tokua and wreckage of the helicopter was subsequently located approximately 0.9 nm seaward of the coast about 4 nm south east of Silur Mission, New Ireland Province.



Figure 1: TAH recorded track from depart to accident.

Source: *Spidertracks recorded data*²

The flight was a Charter flight with one pilot and one passenger, and was conducted in accordance with VFR³ below 5000 ft AMSL⁴.

The passenger was uninjured and swam to shore. The pilot was fatally injured, and his body was later found in the water by local residents, about 200 metres from the impact point.

During the investigation interview, the passenger informed the AIC investigators that they flew through bad weather and had to divert to the nearest land, on the south east of New Ireland Province. The cloud was very low and visibility was significantly reduced in rain. The flight track data on *Spidertracks* showed that the aircraft diverted from its planned track about 50 nm north west of Buka Airport.

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 accident, Papua New Guinea Time (Pacific/Port Moresby Time) is UTC + 10 hours.

² Spidertracks: An innovative satellite-based tracking system, combining satellite communication and GPS technology into one simple, cost effective and portable solution.

³ Visual Flight Rules: Those rules as prescribed by national authority for visual flight, with corresponding relaxed requirements for flight instruments (Source: *The Cambridge Aerospace Dictionary*)

⁴ Above Mean Sea Level

Investigation to date

Safety equipment

The pilot was wearing a life jacket, but it was not inflated. The life jacket was subsequently tested during the day following the accident and it inflated normally. The reason the life jacket was not inflated is yet to be established. The investigation is awaiting the pathologist report to determine the manner and cause of the pilot's death.



Figure 2: Testing the pilot's life jacket

Meteorological Information

The PNG National Weather Service Aerodrome Forecast for Major Ports, that was in effect, was issued at 23:30 UTC on 13 September 2019 for Namatanai as follows:

<i>AYNX</i>	<i>122326Z</i>	<i>1302/1311</i>	<i>18015G26KT</i>	<i>9999</i>	<i>-SHRA</i>	<i>SCT018</i>	<i>SCT030</i>	<i>BKN120</i>
		<i>INTER</i>	<i>1302/1311</i>	<i>4000</i>	<i>+SHRA</i>	<i>BKN008</i>		
		<i>Q</i>	<i>1011</i>	<i>1009</i>	<i>1010</i>			

Namatanai is located 66 nm north west of the accident site.

The above data is interpreted as:

Terminal Aerodrome Forecast (TAF) for AYNX (Namatanai) –

Wind : 180 degrees at 15 knots gusting up to 26 knots.

Weather : Good visibility with light showers and rain, scattered clouds at 1,800 feet, scattered clouds at 3,000 feet and broken clouds at 12,000 feet.

INTER : Visibility reduced to 4km with showers and rain, broken clouds at 800 feet.

QNH : 1011, 1009 and 1010 hPa respectively (three-hour interval from 13 September 02:00 – 11:00)

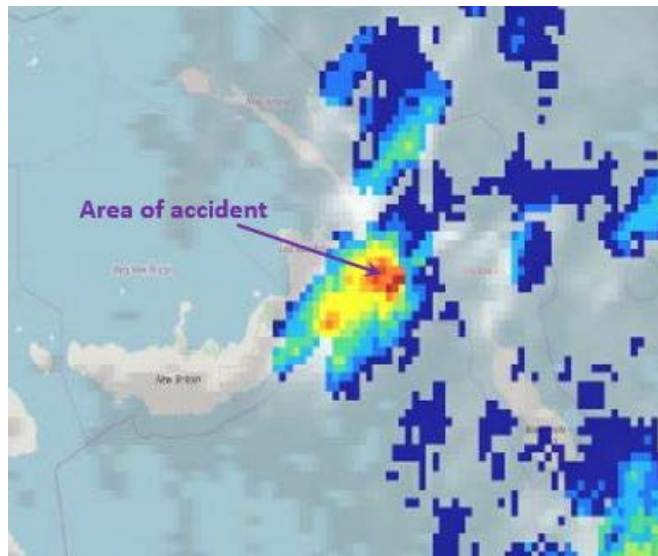


Figure 3: Weather in the area of the accident

Survival aspects

The investigation is examining and analysing evidence in relation to the survival aspects of this accident, which includes, but is not limited to search and rescue activities and the location of the pilot and the passenger in relation to injuries sustained.

Search and Rescue

The Air Traffic Services (ATS) section of the Civil Aviation Authority (CAA) was responsible for maintaining the PNG Rescue Coordination Centre (RCC) up until the formation of PNGASL in July 2007.

Following the aviation regulatory reform in 2007, PNGASL continued providing SAR coordination services to the aviation industry, through the activation of an RCC on a needs basis. The mandate remained with the CAA up until the *Civil Aviation (Amendment) Act 2010* was certified on 9th July 2010. The RCC responsibility was removed from the CAA with the establishment of the Civil Aviation Safety Authority in July 2010 when *Section 13* of the *Civil Aviation Act* was repealed with the *Civil Aviation (Amendment) Act 2010*.

The *Civil Aviation Act* was further amended in 2016 with the certifying of the *Civil Aviation (Amendment) Act 2016* on 13th December 2016. The amended *Act* enabled the Minister for Civil Aviation to formally delegate to PNGASL, CASA PNG or any government agency for which the Minister is responsible and whose functions are consistent with search and rescue operations to establish, maintain and operate a search and rescue coordination centre in accordance with *Section 8A(1)(a)* and *Section 8B(a)* of the *Act*.

ICAO Annex 12, Chapter 1 defines a Rescue Coordination Centre (RCC) as:

A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

Annex 12, Section 2.3 Rescue Coordination Centres and rescue subcentres states:

2.3.1 Contracting States shall establish a rescue coordination centre in each search and rescue region.

2.3.3 Each Rescue Coordination Centre and, as appropriate, rescue subcentre, shall be staffed 24 hours a day by trained personnel proficient in the use of the language used for radiotelephony communications.

During a previous investigation in 2018, PNGASL air traffic control managers and supervisors informed the AIC investigators that the PNGASL room assigned for the RCC was not resourced, and the documentation required to efficiently and effectively conduct SAR operations was not up-to-date. The SAR coordination operation was conducted at the Port Moresby ATS Centre Supervisor's work station.

There was no designated RCC office with equipment and documentation to facilitate the conduct of RCC responsibilities. Air Traffic Services staff did not have that responsibility as a full-time role as required in *Annex 12, Paragraph 2.2.3, Standard*.

The RCC SAR operations did not meet the Standards of *ICAO Annex 12*.

The 2018 investigation found that funding for the establishment, operation, and maintenance of an *Annex 12 Standard* RCC was not being provided by the PNG Government although the provision was available in the *Civil Aviation Act* to the agency conducting RCC duties, to ensure its full functionality and to meet PNG's international obligations.

On the 9th of July 2018, the Minister for Civil Aviation delegated the responsibility for the establishment of a RCC to PNGASL on behalf of the State and directed PNGASL to operate and maintain the SAR RCC established under Section 8A (1) (b) and (c) of the *Civil Aviation Act 2000 (as Amended)*. With regards to the funding of the RCC, the Minister informed PNGASL that he would, in consultation with the Minister for Transport & Infrastructure make a submission to the National Executive Council (NEC). He further directed that for the time being, PNGASL was to bear the cost for the establishment of the RCC.

There is no evidence of a submission to the NEC, nor is there any evidence of consultation as above mentioned. Under *Section 8A (2) of the Civil Aviation Act 2000 (as Amended)*, funding provisions exist for the purpose of establishing, maintaining and operating an RCC, which the Minister is given the power to authorise when it may be necessary.

The *Appropriation (General Public Services Expenditure 2019) Act 2018* does not contain any funding appropriation for search and rescue operations.

The Minister for Civil Aviation, on the 13th of November 2018, exercising his power to make ordinary rules under *Section 69 of the Civil Aviation Act*, promulgated *Civil Aviation Rule (CAR) Part 176* which provides rules for the certification and operation of search and rescue service organisations.

The first official RCC coordinator was appointed on the 30th of July 2018 from within PNGASL. The officer did not meet any of the requirements of *ICAO Annex 12 (Search and Rescue)* to the *Convention on International Civil Aviation* and the *International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual*. At the time of the appointment, *CAR Part 176* did not exist. The officer subsequently completed an *Introduction to Search and Rescue* course with SAR Training Australia on the 21st of February 2019, and an *Aeronautical Search and Rescue Operations* training course with the Singapore Aviation Academy between 17th June and 2nd August 2019. At the time of issuing this *Interim Factual Report* the appointed RCC Coordinator does not meet the requirements of *CAR Part 176*.

The *Search and Rescue Manual* provided to the AIC investigation by PNGASL during the 2018 investigation was dated 5th October 2000. It pre-dated the establishment of PNGASL. Since the promulgation of the *SAR Manual* in 2000 there had been amendments to the *Civil Aviation Act 2000*, in 2010 and 2016, both of which directly related to SAR responsibilities. There had also been two amendments to *ICAO Annex 12*. The first in *July 2001 (Seventh Edition)* and the second in *July 2004 (Eighth Edition)*. A subsequent amendment to the Eighth Edition became effective on 16 July 2007 and covered Rescue Coordination Centre responsibilities.

The *SAR Manual* had not been amended since its promulgation on 5th October 2000. The *SAR Plan* has not been amended since 13th June 2003.

Following the *Ministers Directive* on 9th July 2018, PNGASL commenced amending the *SAR Manual and it remains* in the draft amendment process. These documents have remained outdated despite the fact that the Civil Aviation Authority (CAA) was restructured during the PNG Government's regulatory reform in 2007 which created the separate entities CAA, NAC, PNGASL from the former CAA.

At the time of the promulgation of *CAR Part 176* on 13th November 2018 and prior, CASA PNG did not have a qualified inspector who could carry out audits against *CAR Part 176*.

CASA PNG has informed the investigation that because PNGASL does not hold a *Search and Rescue Certificate* in accordance with *CAR Part 176*, CASA PNG has not conducted an audit of PNGASL with respect to *CAR Part 176*.

AIC comment

The investigation is continuing and will include all circumstances surrounding the accident including, but not limited to, the flight operations, maintenance, weather, human factors and post-accident survival aspects.

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

Safety Action

At the time of the public release of this *Interim Factual Report*, no safety action had been taken.

Recommendations

At the time of the public release of this *Interim Factual Report* no recommendations had been issued by the AIC.

General Details

Date and time:	13 th September 2019 – estimated 01:15 UTC (11:15 local time)	
Occurrence category:	Accident	
Primary occurrence type:	Helicopter impacted water	
Location:	4 nautical miles South East of Silur Mission, New Ireland Province, Papua New Guinea	
	Latitude: 04° 34' 13" S	Longitude: 153° 04' 29" E

Crew details

Nationality	Papua New Guinea
Licence type	PNG CPL H & FW
Licence number	P20236
Total hours	11,500+
Total hours on type	300+

Aircraft Details

Aircraft manufacturer and model:	Airbus Helicopters - BK117 C-1	
Registration:	P2-TAH	
Serial number:	7504	
Total Time Since New (hours)	5,455	
Type of operation	Charter	
Persons on board:	Crew: 1 (Pilot)	Passengers: 1
Injuries:	Crew: Fatal	Passengers: 0
Damage	Aircraft destroyed	

Engine Data

Manufacturer	Safran Helicopter Engines	
Model	Arriel 1E2	
Engine number one (Left)		
Serial Number:	18044	
Total Time Since New (hours)	1,375.9	
Engine number two (Right)		
Serial Number:	3052	
Total Time Since New (hours)	11,135	