

Final REPORT
AIC 21-1001

P2-ALP

Cessna TU206G

Nose landing gear collapse during landing roll

Efogi Airstrip, Central Province

Papua New Guinea

16 February 2021

#### 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 in accordance with Annex 13 to the Convention on International Civil Aviation.

The objective 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.

It is not a function of the AIC to apportion blame or determine liability. At the same time, an investigation report must include relevant factual material of sufficient weight to support the analysis and findings. At all times the AIC endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why it happened, in a fair and unbiased manner.

#### About this report

On 16 February 2021 at 12:57 local time (02:57 UTC), the AIC was notified by the Civil Aviation Safety Authority of Papua New Guinea (CASA PNG) via email, of an accident involving a Cessna C206 aircraft, registered P2-ALP and operated by Airborne Logistics at Efogi Airstrip, Central Province. The AIC immediately commenced an investigation.

This Accident Final Report has been produced by the PNG AIC pursuant to ICAO Annex 13 and has been approved for public release.

The report is based on the investigation carried out by the AIC in accordance with Papua New Guinea Civil Aviation Act 2000 (As Amended), 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 a safety recommendation.

Hubert Mmani, LLB

Chief Commissioner 10 February 2022

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### 1 FACTUAL INFORMATION

#### 1.1 Occurrence Details

On 16 February 2021, at 07:18 local time (21:18 UTC¹), a Cessna TU206G aircraft, registered P2-ALP, operated by Heli Support, trading as Airborne Logistics, was conducting a VFR² non-scheduled passenger flight from Jacksons International Airport, Port Moresby to Efogi Airstrip, Central Province, when during the landing roll, the nose landing gear assembly collapsed.



Figure 1: Overview of the accident flight path and the site

There were 4 persons on board the aircraft; 2 pilots and 2 passengers. No injuries were reported.

The pilot in command (PIC) was pilot flying and was occupying the left seat. The right seat (co-pilot) was occupied by the Flight Examiner<sup>3</sup>. According to the crew, they were conducting line checks for the PIC.

According to the flight crew's iPad<sup>4</sup> recorded data, the aircraft departed Jacksons at 06:55, climbed to 5,000 ft AMSL and tracked via VFR Route Golf (Northeast track). During the interview, the crew stated that there was no significant weather along the route or in the Efogi area.

The recorded data also showed that the aircraft arrived in the Efogi circuit area at 07:15. The crew tracked overhead the airstrip at about 1,300 ft AGL<sup>5</sup> for a strip surface aerial inspection. The crew stated that when they positioned overhead, they visually assessed the airstrip as being suitable for landing and decided to continue the flight to land.

Maintaining 1,300 ft, the aircraft continued and turned onto downwind, 0.8 nm from the airstrip. They then tracked parallel to the airstrip towards the Northwest (see Figure 2). They subsequently turned left onto base and commenced their descent.

The data shows that during the turn from base onto the final approach, the aircraft overshot the final approach profile by 0.3nm. The aircraft heading was subsequently adjusted to intercept the final approach

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

<sup>&</sup>lt;sup>2</sup> 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). VFR requirements are established in PNG Civil Aviation Rule (CAR) Part 91

<sup>3</sup> A person approved by the Director or authorised under these rules to conduct specified flight tests or ZFT simulator tests for flight crew licences or ratings:

<sup>&</sup>lt;sup>4</sup> OzRunways electronic flight bag (EFG) application was installed on the iPad

<sup>&</sup>lt;sup>5</sup> Above Ground level (AGL). All altitude data obtained from the crew's iPad recorded data are referenced to the Efogi Airstrip threshold elevation of 3,800 ft

path (see Figure 2). The aircraft established on the final approach 0.5 nm from the threshold, at about 500 ft AGL.

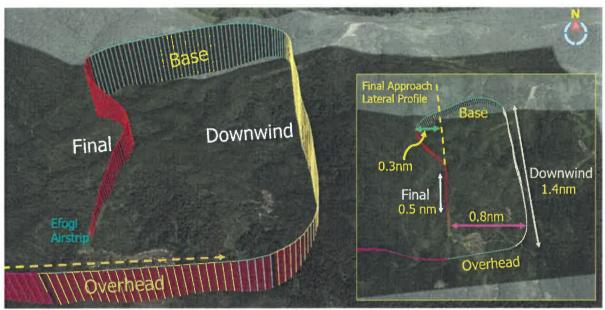


Figure 2: P2-ALP flown path at Efogi Airstrip

The crew stated that they had a steady final approach with an airspeed of 60 knots all the way to touchdown. The pilot flared the aircraft and subsequently touch down. Upon touchdown, the PIC retracted flap and pulled power to idle.

The PIC stated that during the landing roll, he could feel the aircraft running over the bumpy strip surface (surface undulations) and added that at some point, the aircraft appeared to have bounced off the ground. About 150 m from the touch-down point, the nose landing gear assembly collapsed. The nose of the aircraft subsequently dropped as the propeller blades causing the propeller blades to impact the ground while still rotating with engine power. The aircraft skidded along the ground on its belly approximately 30 m before it came to a complete stop.

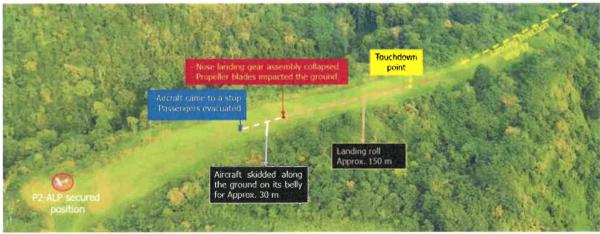


Figure 3: P2-ALP landing roll events at Efogi Airstrip

The crew subsequently shut down the engine and electrical systems and exited the aircraft. The crew stated that they then proceeded to evacuate the passengers and guide them away from the aircraft.



Figure 4: Impact and Damage overview

#### 1.2 The Aircraft

The maintenance records were reviewed during the investigation and the following were identified:

- the aircraft Certificate of Airworthiness (CoA) and Annual Airworthiness Review (AAR) were current.
- the latest scheduled maintenance which was a 50 hourly inspection was carried out as per the schedule
- there were no defects identified during the review pending rectification.

Therefore, the aircraft was deemed to be airworthy and serviceable at the time of the accident.

During the interview, the pilots also confirmed that there were no aircraft performance issues observed.

More details of the aircraft are provided in Appendix A.

#### 1.3 Weather Condition

The pilots informed the AIC that there was clear sky at approximately 35 nm from Port Moresby while enroute to Efogi and upon arrival, at the Efogi area on the day of the accident, 16 February 2021.

They stated that the flight had initially been planned for 15 February 2021, the day before the accident. However, they observed cloud along the planned flight track to Efogi and decided to cancel and replan for the next day.

According to the locals, it had rained the night of 15 February 2021.

#### 1.3.1 Efogi local weather reports

The pilots stated during interview that for their flights to Efogi, they would usually call a local at Efogi to obtain weather and strip surface condition information through radio communication administered by the Kokoda Trekking station at Efogi. This radio was reportedly stolen and they, therefore, could not obtain weather and airstrip condition information from the persons at the Efogi on the day of the accident flight.

### 1.4 Pilots

#### 1.4.1 PIC

The PIC was the pilot in command under supervision (ICUS) and had the following qualifications:

- PNG CPL (A)6 issued on 2 May 2005
- Current medical class 1 with no medical limitation
- Endorsed on the single engine aeroplane less than 5700 kg MTOW

Refer to Appendix A for more information about the PIC.

#### 1.4.2 Co-pilot

The co-pilot of the accident flight was the Flight Examiner and had the following qualifications:

- PNG CPL (H)<sup>7</sup> and CPL(A) issued on 19 December 2012 and 26 November 2020 respectively
- Current medical class 1 with no medical limitation
- Endorsed on the single engine aeroplane less than 5700 kg, single engine helicopter less than 2700 kg and multi-engine helicopter

The co-pilot was issued with an Instrument of Authorisation (IOA) by the Civil Aviation Safety Authority (CASA) of PNG on 17 November 2020 to carry out functions of a Flight Examiner in accordance with PNG Civil Aviation Rule (CAR) Part 61.905(a)(2) for the purpose of conducting the following flight tests of pilots on Cessna 206 aircraft: -

Flight Test Trainee/type of Training

Line checks
 Base checks
 Captains
 Captains

3) Competency checks Aircraft type ratings

Appendix A contains more information about the co-pilot.

#### 1.4.3 Pilots' recent history on Cessna TU206G operation into Efogi Airstrip

#### 1.4.3.1 Prior to issuance of AOC

The investigation observed flight records showing that flights had been conducted to Efogi and other airstrips prior to the date of the Operators AOC. During the interview, the crew informed AIC that there were flights conducted into Efogi Airstrip on P2-ALP prior to the issuance of the Air Operations Certificate (AOC) on 11 January 2021. They confirmed that they were private flights (see Table 1).

<sup>6</sup> Commercial Pilot License for aeroplane

<sup>7</sup> Commercial Pilot License for helicopter

Date	Type of flight	Purpose of the flight
28 November 2020	Private Flight	Initial flight into Efogi Airstrip on P2-ALP.
After 28 November 2020	Private Flights	Few more flights were conducted in November with the purpose of familiarisation on the aircraft and to develop procedures and processes in preparation for AOC
12 December 2020	Private Flight	AOC initial Check Flight

Table 1: Flights into Efogi prior to AOC issuance

#### 1.4.3.2 After the AOC issuance

The pilots informed the AIC that after the issuance of the AOC, they started conducting commercial flights into Efogi Airstrip and other airstrips as well. During those flights, they also conducted Line and Route/Aerodrome checks for the PIC.

According to the Operator's airstrip categorisation, *Issue 2.0, dated 09 January 2021 current at the accident time*, Efogi Airstrip is a Category F airstrip, which requires the pilot under instruction to do 10 landings and 10 take-offs during the Line training on each aircraft to be operated and at least 3 landings and 3 take-offs to be completed at that specific airstrip. On 14 February 2021, the PIC completed the last of the three landings required *(refer 1.6.1.2 of this report)* at Efogi Airstrip, for the Flight Examiner to issue an authorisation to conduct single pilot flights into Efogi Airstrip and other Category F airstrips to conduct solo flights.

### 1.5 Airstrip Information

#### 1.5.1 Efogi Airstrip

Efogi Airstrip is in the Central Province, about 32 nm Northeast of Port Moresby. The steep Northern slope of the ridge situated immediately to the South of the airstrip makes it a one-way landing and take-off strip.

During the on-site investigation, it was observed that the grass had been cut. There was a significant amount of dead grass observed on the surface that appeared to have been left on the strip after it had been cut. The investigation also noticed irregular undulations along the length of the strip during the site visit.



Figure 5: Efogi airstrip damp wheel bogging track

#### 1.5.2 RAA survey and the Operator's Airstrip Route Guide

The Rural Airstrip Agency (RAA) had, through engagement by the Central Provincial Government, conducted a survey and restoration program of certain airstrips in the province. They conducted a survey on Efogi Airstrip in March 2019. A copy of the survey report was provided to AIC (refer to Appendix B).

The AIC reviewed the Airstrip Route Guide used by Airborne Logistics during the accident flight (refer to Appendix C) in their operations and found variations in data between the Airstrip Route Guide and the RAA survey report. The table below summarizes the variations of both reference documents.

E THE	Operator's Efogi Route Guide used during accident	RAA Survey Data, dated March 2019		
Slope	9.5%	6.7%		
Length	487 m	499 m		
Elevation	3.965 ft	3,800 ft		

Table 2: Comparison of data from RAA survey and Operators Efogi Airstrip Route Guide

The Operator's Airstrip Route Guide also did not contain information on the soft top layer of the strip.

### 1.6 Organisation

### 1.6.1 Operator - Heli Support (t/a) Airborne Logistics

The Operator conducts charter and regular Fare & Freight (F&F) operations within PNG. It held an AOC (119/052) issued on 11 January 2021 air operations in accordance with *CAR Part 135 and Part 136*. The Operator operated an Airbus Helicopter AS350 and a Cessna TU206G (accident aircraft).

#### 1.6.1.1 Operator's Airstrip Classification

According to the *Issue 2.0* of the Operator's *Route Guide*, dated 09 January 2021, Efogi is a Category F airstrip. Table below contains the Category F Initial Training requirements.

Airstrip Category	Initial Training
	In person briefing with the Chief Pilot or a flight instructor /examiner specifically relating to that
	airstrip.
F	AND;
	Must have at least 500 hours PNG time, must have operated to and have been satisfactorily checked
	on either that specific airstrip or another Category F airstrip with at least 10 landings and 10 take offs
	completed during line training on each aircraft
	AND;
	at least 3 landings and 3 take offs to be completed at that specific airstrip.

Table 3: Category F and its requirements

These were the requirements the PIC had to undergo and completed on 14 February 2021 (refer 1.4.3.2 of this report) under supervision and instruction of the co-pilot/Flight Examiner.

The Training records for the co-pilot/Flight Examiner did not show that he had, with another Flight Examiner, conducted initial and familiarization flight training into Efogi airstrip in a Civil Aviation Rules (CAR) Part 135 applicable fixed wing aircraft.

#### 1.6.1.2 Operator's Hazard Identification and Risk Assessment

According to the Civil Aviation Form 0058 (CA005) submitted by the Operator, both pilots walked the entire airstrip on 12 February 2021 to inspect it, and had noted damage to the runway near the touchdown point from other operators, and they briefed to land long of the damage to clear it during the accident flight.

<sup>8</sup> CASA PNG's Accident and Incident Occurrence Report Form

In the Operator's Hazard Identification and Risk Management procedures in the Safety and Quality Manual, Chapter 2 requires the Operator to log identified hazards into their operational and safety database, Air Maestro. However, there were no hazards logged in regard to Efogi airstrip in regard to the airstrip condition they had identified.

#### 1.6.2 Civil Aviation Safety Authority (CASA) of PNG

CASA PNG is a statutory body with a legal mandate to promote aviation safety and security through effective safety regulation of the civil aviation industry, with particular emphasis on preventing aviation accidents and incidents within the civil aviation system in Papua New Guinea.

CASA maintains oversight through audits and surveillance programs to ensure that certificate or document holders, as specified under the Civil Aviation Act, comply with the rules and standards for which the certificates or documents were issued.

Following assessment of the exposition (application with supporting documentation) by CASA PNG, the Director of Civil Aviation issued an AOC for the Operator to operate under *CAR Part 135*.

#### 1.6.3 Civil Aviation Rule Part 135

The Civil Aviation Rules, more commonly shortened to CAR's are ordinary rules made by the Minister Civil Aviation for civil aviation operations in PNG.

The Operator was authorised under CAR Part 119 to conduct civil aviation operations as a *CAR Part 135* Operator and other applicable CAR Parts.

For the purpose of this investigation, the following sections of CAR Part 135 are emphasized:

#### CAR Part 135.503 Assignment of flight crew duties,

- (a) A holder of an air operator certificate must ensure that every person assigned as a flight crew member, on an air operation conducted under the authority of the certificate —...
  - (4) meets all route and aerodrome qualification requirements for the intended operation...

The training records only showed that the co-pilot/Flight Examiner had been checked into Efogi Airstrip in a helicopter, under *CAR Part 136*. The investigation did not observe any records to show that the co-pilot/Flight Examiner had complied with *CAR Part 135.503(a)(4)*.

#### CAR Part 135.563 Flight crew training programme,

- (b) The certificate holder shall ensure that its flight crew training programme includes initial, transition, and recurrent training requirements applicable to—...
  - (2) the routes and aerodromes appropriate to the intended operation;...

The Operators Fixed Wing Training & Checking Manual Section 7 complies with CAR Part 135.563(b)(2). However, according to the co-pilot's records, the investigation did not observe any records to show that the co-pilot/Flight Examiner had undergone the initial training as a requirement of CAR Part 135.563(b)(2).

## 2 AIC COMMENT

#### 2.1 The accident

The AIC identified that the aircraft was serviceable at the time of the accident flight. The damage observed on the propeller blades was consistent with low power engine operations. Also, the investigation determined that there was nothing unusual with the aircraft and its performance during the approach and landing.

The evidence gathered by the investigation is consistent with the scenario: The occurrence encountered by P2-ALP at Efogi Airstrip after the initial touchdown was due to the aircraft, upon landing, rolled over irregular undulated strip surface area which caused the aircraft to bounce. The aircraft nose landing gear encountered soft layer of the strip which caused the nose wheel to bog, causing the landing gear to collapse.

### 2.2 Airstrip Conditions

The AIC determined that the pilots anticipated, during the accident flight, that the strip conditions they assessed on 14 February 2021 (the last flight before the accident flight) would remain the same. However, with heavy rain on the day before the accident, the strip conditions changed. The rain logged surface was hidden under grass covered surface.

Due to unpredictable weather conditions at Efogi Airstrip, the important weather and airstrip condition information from source at Efogi was vital. However, that information was not gathered on the day of the accident. The investigation determined that the crew stated that the radio that they communicate with was stolen and they decided to fly to Efogi and conduct an aerial inspection. The observation was misleading due to the grass coverage of the surface and that the observation was at height above the airstrip.

## 2.3 Airstrip Route Guide

The RAA survey information report data for the survey conducted in March 2019 varies significantly from the route and strip guide information that was being used by the Operator. The RAA survey report identified the soft layer areas at Efogi Airstrip. The investigation notes that the Operator does not have access to that information.

## 2.4 Flight Operations

The AIC found that although the co-pilot was an authorised Flight Examiner, he had not undergone initial training and Route and Aerodrome Check in compliance with CAR Part 135.563 (b)(2) and 135.503 (a)(4) respectively. As CAR Part 135 applies to fixed wing aircraft operations, it is understood that fixed wing operations familiarity. Although the AIC understands that the Flight Examiner is qualified in flying the type of aircraft involved in the accident, he had not undergone initial training or familiarization with a Flight Instructor or Examiner to Efogi airstrip in the type of aircraft or other fixed wing aircraft. The investigation found that the Flight Examiner had experience flying to Efogi as a helicopter pilot. However, there were no records to show that he had not been checked on a CAR 135 applicable aircraft into Efogi or any of the other airstrips in the aerodromes to which they operated under CAR Part 135.

The investigation concludes that PNG airstrip approach and landing techniques in an aeroplane are not the same as in a helicopter and that helicopter training under *CAR Part 136* into airstrips should not be a substitute for fixed wing training and checking of pilots into airstrips under *CAR Part 135*.

## 3 SAFETY RECOMMENDATION

## 3.1 Recommendation number AIC 21-R05/21-1001 to CASA PNG

The PNG Accident Investigation Commission (AIC) recommends that CASA PNG should ensure that all applicable Operators are aware that operating under *CAR Part 136* as helicopter pilots does not qualify any pilot to operate into airstrips with a *CAR Part 135* applicable aircraft without satisfying *CAR Part 135* initial or transition training and check requirements for route and aerodromes.

# 4 APPENDICES

# 4.1 Appendix A

## 4.1.1 Table containing additional information of the report

	Gen	eral Details			
Date and time		16 March 2021, 21:18 UTC			
Occurrence category		Accident			
Primary occurrence type		Abnormal Runway Contact	t .		
Location		Efogi Airstrip, Central Prov	vince		
	Type of Operat	ion and damage details			
Type of Operation		VFR, Non-schedule passen	ger		
Damage		Nose landing gear assembly			
	Cr	ew details			
PI	C	Co	-pilot		
Gender	Male	Gender	Male		
Age	41	Age	39		
Nationality	Papua New Guinean	Nationality	Australian		
Licence type	PNG CPL (A)	Licence type	PNG CPL (A & H)		
Total hours	1414.70	Total hours	5,350.5		
Total hours in Command	222	Total hours in Command	4,967.5		
Total hours on type	57	Total hours on type	66		
	Airc	raft Details	•		
Aircraft Manufacturer		Cessna Aircraft Company			
Aircraft Model		TU206G			
Serial Number		U206-06029			
Year of manufacturer		1981			
Total hours since new		9,574.8			
Total cycles since new		13,327			
Certificate of Registration (	(CoR) issued	25 June 2019			
Certificate of issued		25 June 2019			
Airworthiness	expire	Non-Terminating			
		Engine			
Engine manufacturer		Continental Aerospace Technologies			
Engine Model		TSIO520M7B			
Serial number		825532-R			
Total time since new		2,653.4			
Total time since overhaul		182			
	F	ropeller			
Manufacturer		McCauley Propeller			
Model		D3A34C402-C			
Serial Number		983890			
Total time since new		5,425.8			
Hours since Overhaul		287.6			

## 4.2 Appendix B

## 4.2.1 RAA Survey Report, dated March 2019

Airstrip name: Efogi					
Airstrip code:	AYEF	Date surveyed:	27/03/2019		
Province:	Central	Surveyed by: (name)	ATTENDED TO		
District:	: Kairuku Hiri		RAA		
Airstrip type:	@ one-way	Date last surveyed:	No Previous		
□ two-way					
Take-off direction:	350°	Season:	☐ dry ☑ wet		
Co-ordinates (at parking bay):	S 09° 09.342′	Runway strip length:	499 m		
	£ 147° 39.603′	Elevation (or parking bay);	3965 ft		
Runway strip width:	32 m	Average overall slope:	6.7 %		
	Obstacle Limitar	tion Surfaces			
Take-off/ Approach		For two-way air	rstrips only		
5% up from the horizontal.	⊠ Yes	5% up from the	☐ Yes		
clear for 600m horizontally:	□ No/Non-	horizontal, clear for	No/Non-		
and these products the defense of the contract	serviceable	600m horizontally:	serviceable		
5% side splay right, clear	™ Yes	5% side splay right,	☐ Yes		
for 600m horizontally:	□ No/Non-	clear for 600m	□ No/Non-		
160 seek datase da	serviceable	horizontally:	serviceable		
5% side splay left, clear for	⊠ Yes	5% side splay left, clear	□ Yes		
600m horizontally:	□ No/Non	for 600m horizontally: No/Non-			
Transitional	serviceable		serviceable		
20% side slope, clear for	Ves				
2m above the runway strip:	⊠ No/Non-serviceat	ita			
and a second second second	The state of the s	and the second s			
Mendenda	Visual Aids for		ER Man		
Windsock present:	☐ Yes ☑ No/Non-	Marker cones delineate the runway strip	⊠ Yes  □ No/Non-		
	serviceable	the runway strip	serviceable		
Windsock setout:	Complying	More marker cones	⊠ Yes □ No		
Williasock sessor.	☑ Non-complying	required	EN TES EN MO		
Windsock condition:	Adequate	No. marker cones	#12 Yellow		
0 0 11 1 10 10 10 10 10 10 10 10 10 10 1	☑ Replace	required			
	Surface Type at				
Surface cover:	☐ Paved	Surface hardness:	☐ Soft/Non-		
(select one only)	SHOW L GLACIN	Area de la companya d	serviceable		
facient are civily	Short grass		⊠ Medium		
	☐ Long grass		Hard		
	Patchy grass	Surface roughness:	☐ Smooth		
			The second secon		
	and the latery of the later of the latery of		20 Rough		
Soil type:	□ Bare		⊠ Rough  ☐ Very rough/		
Soil type: (select one only)	☐ Bare ☐ Fine-grain soil		☐ Very rough/		
Soil type: (select one only)	□ Bare	Surface undulation/even	□ Very rough/ Non-serviceable		
	☐ Bare ☐ Fine-grain soil (silt, clay)		□ Very rough/ Non-serviceable		
	☐ Bare ☐ Fine-grain soil (silt, clay) ☐ Coarse-grain soil		Very rough/ Non-serviceable ness comment:		
(select one only)	☐ Bare ☐ Fine-grain soil (silt, clay) ☐ Coarse-grain soil (sand, gravel)	Surface undulation/eveni	Very rough/ Non-serviceable ness comment:		
(select one only)	☐ Bare ☐ Fine-grain soil (silt, clay) ☐ Coarse-grain soil (sand, grayel) ☐ Dry	Surface undulation/eveni Very undulating and notice	Uvery rough/ Non-serviceable ness comment: ceable upon take-off		
(select one only)	☐ Bare ☐ Fine-grain soil (silt, clay) ☐ Coarse-grain soil (sand, gravel) ☐ Dry ☐ Moist	Surface undulation/evening Very undulating and notice and landing	Very rough/ Non-serviceable ness comment: reable upon take-off		
(select one only)	□ Bare □ Fine-grain soil (silt, clay) □ Coarse-grain soil (sand, gravel) □ Dry □ Moist □ Wet	Very undulating and notice and landing Other surface comments:	Very rough/ Non-serviceable ness comment: reable upon take-off		
(select one only)	□ Bare □ Fine-grain soil (silt, clay) □ Coarse-grain soil (sand, gravel) □ Dry □ Moist □ Wet □ Saturated /Non-	Very undulating and notice and landing Other surface comments:	Very rough/ Non-serviceable ness comment: reable upon take-off		

## 4.3 Appendix C

## 4.3.1 Operator's Airstrip Route Guide for Efogi used during the accident flight

CODE	AYEF Runway Direction		17 / 35	
Slope. 3	9.5% down to N	Length	487m	
Runway Strength	Group 4	Elevation	3,800ft	
Location	Central Province	Airstrip Category	F	
Remarks	Land 17, TO 35. Undulating surface. Turbulence and windshear on final, exercise caution late final. Approach slightly steep aiming 1/4 into the runway due wind shear late final.			
Limitations	Go around is restricted and landing must be committed to as per go around procedures.			
Go Around	If required, initiate go around early due to the steep runway slope, go around late final is not possible. Approach is to be stable and commit to landing at 4000ft, do not go around below 4000ft.			
	Go around to initially climb straight ahead, veer right of the runway, then make a left turn behind the village climbing up the valley. Can turn back over the runway or turn over the ridge to the west of the runway once clear.			
Straight In Approach	No			