الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY

United Arab Emirates

Air Accident Investigation Sector

Serious Incident

- Preliminary Report -

AAIS Case Nº: AIFN/0007/2017

Aircraft Vectored below Minimum Safe Altitude

Operator:	Royal New Zealand Air Force
Make and Model:	Lockheed C-130
Nationality and Identification:	New Zealand, NZ7003
Place of Occurrence:	Approximately 10NM west of Al Minhad Airport
State of Occurrence:	The United Arab Emirates
Date of Occurrence:	14 June 2017

Air Accident Investigation Sector
General Civil Aviation Authority
The United Arab Emirates

Occurrence Brief

Occurrence Reference	:	AIFN/0007/2017
Occurrence Category	:	Serious Incident
Name of the Operator	:	New Zealand Air Force
Manufacturer	:	Lockheed Corporation
Aircraft Model	:	C-130
Engines	:	Four Allison T56-A-15 Turboprop
Nationality	:	New Zealand
Identification	:	NZ7003
Type of Flight	:	Military
State of Occurrence	:	The United Arab Emirates
Place of Occurrence	:	Approximately 10NM west of Al Minhad Airport
Date and Time	:	14 June 2017, 0330 UTC
Injuries to Passengers and Crew	:	None

Investigation Objective

This Investigation is performed pursuant to the United Arab Emirates (UAE) *Federal Act No. 20 of 1991*, promulgating the *Civil Aviation Law, Chapter VII- Aircraft Accidents,* Article 48*.* It is in compliance with *CAR Part VI Chapter 3*, and in conformity with *Annex 13* to the Convention on International Civil Aviation.

The sole objective of this Investigation is to prevent aircraft accidents and incidents. It is not the purpose of this activity to apportion blame or liability.

This Preliminary Report is adapted from the Final Report format contained in *Annex 13* to serve the purpose of this Investigation. The information contained in this Report is derived from the data collected during the ongoing investigation of the Incident.

Later Interim Reports or the Final Report may contain altered information when new evidence becomes available during the investigation.

Investigation Process

The Air Accident Investigation Sector (AAIS) of the United Arab Emirates was notified about the Incident on 14 June 2017. The Occurrence was reported by Dubai air traffic control via the Report of Safety Incident (ROSI) software on the GCAA website.

The occurrence was classified as a Serious Incident and the AAIS assigned an Accident Investigation File Number AIFN/0007/2017 for the case.

The AAIS formed the Investigation team led by the investigator-in-charge (IIC) and members from the AAIS for different investigation areas. The Transport Accident Investigation Commission (TAIC) of New Zealand, being the State of the Registration of the Aircraft were notified of the Incident. The AAIS is leading the Investigation and will issue the Final Report.

This Preliminary Report is publicly available at:

http://www.gcaa.gov.ae/en/epublication/pages/investigationReport.aspx

Notes:

1. Whenever the following words are mentioned in this Report with first capital letter, they shall mean the following:
   - (Aircraft)- the aircraft involved in this serious incident
   - (Commander)- the Commander of this incident flight
   - (Copilot)- the Copilot of this incident flight
   - (Investigation)- the investigation into the circumstances of this serious incident
   - (Incident)- this investigated serious incident
   - (Report)- this Preliminary Report.
2. Unless otherwise mentioned, all times in this Report are UTC time. Local time of the United Arab Emirates is UTC plus 4 hours.

Abbreviations

AAIS	The Air Accident Investigation Sector of the United Arab Emirates
ATC	Air traffic control
ATCO	Air traffic control officer
GCAA	The General Civil Aviation Authority of the United Arab Emirates
ICAO	International Civil Aviation Organization
IIC	Investigator-in-charge
ILS	Instrument landing system
kts	Knots (air/wind speed)
METAR	Meteorological terminal air report
MSA	Minimum safe altitude
NM	Nautical miles
OMDM	Al Minhad Airport
RMA	Radar minimum sectoring altitude
TAIC	The Transport Accident Investigation Commission of New Zealand
UAE	The United Arab Emirates
UTC	Coordinated universal time

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1. Factual Information

1.1 History of the Flight

On 14 June 2017, a Royal New Zealand Air Force Lockheed C-130 military aircraft, identification mark NZ7003, departed Baghdad International Airport (ORBI), Iraq, for Al Minhad Airport (OMDM), the United Arab Emirates.

The Aircraft was one of three in the hold which were awaiting clearance to commence the approach to runway 09 due to fog and low visibility at OMDM. When the weather improved, the C130 was vectored for an ILS approach to runway 09 as the second aircraft in sequence.

The Aircraft was under the control of Al Maktoum Radar when the Air Traffic Control Officer (ATCO) instructed the Aircraft to descend to 3,000 feet, followed by a clearance to descend to 2,000 feet. When the Aircraft was subsequently vectored to a heading of 030 it had just cleared a sector with a radar minimum sector altitude (RMA) of 2,000 feet.

After turning to heading 030, the Aircraft entered a sector with an RMA of 2,800 feet to capture the ILS for runway 09 as instructed. Entering this sector triggered a brief automatic minimum safe altitude warning on the ATC monitor.

Another brief automatic LOW warning was triggered prior to becoming established on the ILS localizer for runway 09.

The Aircraft landed safely without further incident.

1.2 Injuries to Persons

There were no injuries to persons as a result of this occurrence.

1.3 Damage to Aircraft

The Aircraft was undamaged.

1.4 Other Damage

No other damage was reported.

1.5 Personnel Information

Detailed personnel information and competences of the flight crew, air traffic controllers, and other relevant personnel will be included in the Final Report.

1.6 Aircraft Information

Aircraft and engine information will be included in the Final Report. Relevant Aircraft systems will be examined during the course of the Investigation.

1.6 Meteorological Information

At the time of the Incident, the wind at OMDM was 4 kts from 170 degrees, with fog and a reported cloud base of 200 feet. The visibility at runway 09 had gradually improved from 275 meters at 0230 UTC to 800 meters at 0330 UTC. The temperature and dew point were 27°C.

The National Center of Meteorology & Seismology supplied the following weather information (METAR) for the day of the Incident.

OMDM 140230Z AUTO 15004KT 0050NDV R09/0275N R27/0200N FG VV000 26/26 Q0999=

OMDM 140243Z AUTO 14005KT 0150NDV R09/0400N R27/0300N FG VV000

26/26 Q0999=

OMDM 140300Z AUTO 14005KT 0200NDV R09/0450N R27/0325N FG VV000
26/26 Q0999=

OMDM 140310Z AUTO 16004KT 0350NDV R09/0500N R27/0600N FG VV000
26/26 Q0999=

OMDM 140330Z AUTO 17004KT 0800NDV R09/0800N R27/P2000N FG VV005
27/27 Q0999=

OMDM 140338Z AUTO 16004KT 130V190 2300NDV BR NCD 27/27 Q1000=

OMDM 140400Z AUTO 16003KT 120V220 6000NDV NCD 28/26 Q1000=

1.7 Aids to Navigation

The aids to navigation will be examined during the Investigation.

1.8 Communications

Communications between air traffic control and the flight crew will be considered as part of the Investigation.

1.9 Aerodrome Information

OMDM is a military airport with an elevation of 165 ft. It is located approximately 25 kilometers south-east of the city of Dubai, the United Arab Emirates. The airport has one asphalt runway, 09/27, 3953 meters long and 45 meters wide.

The airport coordinates are 25° 01’ 36.55” North and 055° 21’ 58.48” East.

Air traffic control policy and procedures will be discussed in the Final Report.

1.10 Flight Recorders

To be discussed in the Final Report.

1.11 The Wreckage and Impact Information

As stated in subsection 1.3, the Aircraft was undamaged.

1.12 Medical and Pathological Information

Post-incident blood tests were not conducted.

1.13 Fire

This section is not relevant for this investigation.

1.14 Survival Aspects

This section is not relevant for this investigation.

1.15 Tests and Research

To be discussed in the Final Report.

1.16 Organizational and Management Information

To be discussed in the Final Report.

1.17 Additional Information

At the time of writing the Preliminary Report, there was no other factual information available that was relevant to the circumstances leading up to the Incident.

2. Ongoing Investigation Activities

The Investigation is ongoing and will include further examination and analysis of:

- Air traffic control equipment and systems
- Air traffic control policy, procedure, management, and organization
- Any other safety aspects that may arise during the course of this Investigation.

The Investigation will carry out in-depth analysis of:

- Contextual factors
- Human factors
- Organizational factors.

3. Safety Concerns and Actions

No safety concerns or actions have been issued at this stage of the Investigation. During the course of the Investigation, any immediate safety concerns that arise will be promulgated as prompt safety recommendations.

This Report is issued by:

The Air Accident Investigation Sector
General Civil Aviation Authority
The United Arab Emirates

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