Aviation Safety Investigation Report 199402731

Pilatus Aircraft Ltd
PC-9
Aerospatiale
AS.355F1

16 September 1994

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Aviation Safety Investigation Report

199402731

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199402731 **Occurrence Type:** Incident
Location: Williamstown
State: VIC **Inv Category:** 4
Date: Friday 16 September 1994
Time: 1126 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Pilatus Aircraft Ltd
Aircraft Model: PC-9
Aircraft Registration: **Serial Number:**
Type of Operation: Non-commercial Other (including military)
Damage to Aircraft: Nil
Departure Point: East Sale VIC
Departure Time:
Destination: East Sale VIC

Aircraft Manufacturer: Aerospatiale
Aircraft Model: AS.355F1
Aircraft Registration: VH-HWA **Serial Number:** 5145
Type of Operation: Non-commercial Corporate/Executive
Damage to Aircraft: Nil
Departure Point:
Departure Time:
Destination:

Approved for Release: Tuesday, November 8, 1994

Factual Data

This incident involved the RAAF Roulettes aerobatic team operating in close proximity to a media helicopter during an aerobatic display.

During the week prior to the occurrence, the RAAF Roulettes aerobatic team had coordinated plans to provide an aerobatic display during the launch of a Frigate at Williamstown (WMS) naval dockyard. Parties involved in the planning/cooordination were the Roulettes administration officer, the Essendon Tower (EN TWR) team leader and the Melbourne Ops District Office Support Specialist (DOSS) staff.

The plan was for the Roulettes to arrive and hold at Freeway Overpass (FWO) at 3000 feet, weather permitting and then to proceed to WMS for the display. The airspace required for the display was a three nautical mile radius around WMS up to 4000 feet. A temporary restricted area was promulgated by NOTAM up to 2000 feet to cover the OCTA portion, the CTA base at WMS being 2000 feet. The controlling authority was EN TWR.

Both the EN TWR team leader and the ML Terminal Area Controller (TAC) were advised of the reason for the NOTAM and the intentions of the Roulettes, including the possible need to operate up to 4000 feet.

When the Roulettes arrived at FWO, the weather was marginal for holding at 3000 feet so they were cleared to hold at 2000 feet. When they were ready to proceed to WMS for the display, they were cleared by EN TWR to "commence their run". The clearance did not include any reference to an airspace release (ie altitude limits) for the display nor a transit altitude for the run-in from FWO to WMS.

A media helicopter, VH-HWA, was operating over WMS at 2500 feet on Radar Advisory Service (RAS) frequency in Departures South (DEP S) airspace with DEP S concurrence. EN TWR passed traffic advice to Roulettes on VH-HWA but VH-HWA was not not advised of the intentions of the Roulettes. On arrival at WMS the Roulettes commenced an aerobatic display which took them to approximately the same altitude as, and in close proximity to, VH-HWA. Although the Roulettes did not acknowledge traffic advice on VH-HWA, they later confirmed they were aware of and maintained separation from, VH-HWA, during the display.

The pilot of VH-HWA was unaware that the Roulettes had him in sight and were maintaining visual separation from him during the display but he did not report the matter to RAS. Because transponder codes were garbled with the aircraft in close proximity to each other, the Melbourne Approach Control Unit (ACU) were unaware that the Roulettes had conducted their display in close proximity to VH-HWA until after the event when advised by EN TWR.

The incident occurred during a high traffic load at EN TWR and a moderate to high traffic load in DEP S. In addition, there was ADC training in EN TWR that necessitated the ADC letting the trainee take control of the situation, with the ADC providing as little assistance as possible.

Analysis

Melbourne Area Approach Control Centre (AACC) controllers had no specific handover in the morning from the TAC to make them aware that the Roulettes would be conducting a display at WMS and requiring ML Terminal Area (TMA) airspace. They received the NOTAM on the restricted area but thought it was only to protect the launch of the ship, even though the NOTAM actually stated "due air display". Details of the air display, including the controlling authority and possible airspace requirements, had previously been advised to the TAC who had made an appropriate annotation in the daily diary. However, the daily diary had not been checked by the oncoming morning TAC. In addition, there was nothing in the handover/takeover sheet advising of the Roulettes display.

On the flight plan received from the Roulettes there was no mention of an air display nor any request for a higher level at WMS. When ML RAS requested from DEP S a level for VH-HWA to operate at WMS, both controllers agreed that 2500 feet would give the required tolerance with the restricted area. ML DOSS had informed the EN team leader of the proposed restricted area and the Roulettes requirements. The team leader had prepared a briefing note but the EN aerodrome controller (ADC) was busy supervising a trainee and had not assimilated the information in the note, in particular the possible need for a climb above the restricted area.

Regarding ML TMA, the TAC handover/takeover sheet did not give a reason for the restricted area (upper limit 2000 feet) and the daily diary was not checked. The Airways Data Systems Officer (ADSO) staff did not show the flight plan to the TAC, however, the flight plan did not indicate any air display at WMS.

The EN ADC did not specify any altitudes in his clearance to the Roulettes when he cleared them to"make their run", nor did he ascertain their requirements. In addition, the Roulettes then accepted a clearance, without question, that included no reference to altitudes. VH-HWA was not passed traffic information on the Roulettes because ML RAS were unaware they would be operating above 2000 feet; the upper limit of the restricted area. Further, VH-HWA and the Roulettes were on different frequencies.

There had been no coordination between EN TWR and DEP S regarding the possibility (or intentions) of the Roulettes to operate above the upper limit of the restricted area (2000 feet) in DEP S airspace.

Factors

The following factors were considered relevant to the development of the incident:

1. The restricted area at WMS was only promulgated to the base of CTA. Had it been promulgated to 4000 feet (the original highest planned operating altitude for the Roulettes) then it would have been under one controlling authority and VH-HWA would not have been over WMS at 2500 feet at the same time the Roulettes were conducting an air display.

2. The Roulettes were not given a proper clearance by the EN ADC to proceed to WMS and to conduct the display. The clearance was deficient in that no altitudes were specified, either for transit to WMS or for the display at WMS.

3. The Roulettes accepted a clearance that did not specify altitudes. This was probably as a result of an expectancy that they could operate up to 4000 feet, such expectancy being created by the planning for the event that occurred the previous week.

4. There were numerous breakdowns in communication/coordination between elements of ATC because controllers failed to follow standard procedures which would have averted these breakdowns. In failing to follow such procedures, certain elements of ATC were unaware of the intentions of the Roulettes.

5. The flight plan received from the Roulettes made no mention of an air display at WMS and contained no request for a higher level at WMS. Consequently, the flight progress strips were prepared without this knowledge.

6. The pilot of the helicopter was not given traffic information on the Roulettes. This was because ML RAS was unaware that the Roulettes would be operating above the upper limit of the restricted area.

7. The incident occurred during a high traffic load at EN TWR when ADC training was in progress. In addition there was a moderate to high traffic load at DEP S.

Safety Action

All controllers involved were counselled. The counselling included a reminder of the need not to be complacent, to ensure that all control instructions are correctly carried out and coordinated so that no controller is left in any doubt.

ML DOSS and Manager Ops Support were consulted to ensure a standardised method of advice to all relevant parties, including the contents of NOTAMS, the way information is disseminated and the need with the initial briefing to ensure the responsibilities of the controlling authority are understood. Had the NOTAM included the vertical limits with the relevant tolerances, this incident may have been avoided.

A standardisation item is to be issued to highlight the need for precise descriptions of airspace releases plus a reminder that performance characteristics need to be considered when formulating airspace releases.

A standardisation item is to be issued highlighting the importance of being specific when defining a route clearance.

The ML TMA Stream Specialist conducted counselling for all ML TACs to ensure that correct handover/takeover procedures apply. In addition, TMA staff were to be reminded of their responsibilities for ensuring a correct handover is carried out.

All controllers were to be reminded of the separation requirements for formation flights.

ADSOs were to be reminded of their responsibilities to pass this type flight plan to the TAC.