

# ESASI – FocusOn... Investigating Air Traffic Events

## ATCU assistance to G-BXBU, stuck above cloud

Avions Mudry CAP 10B

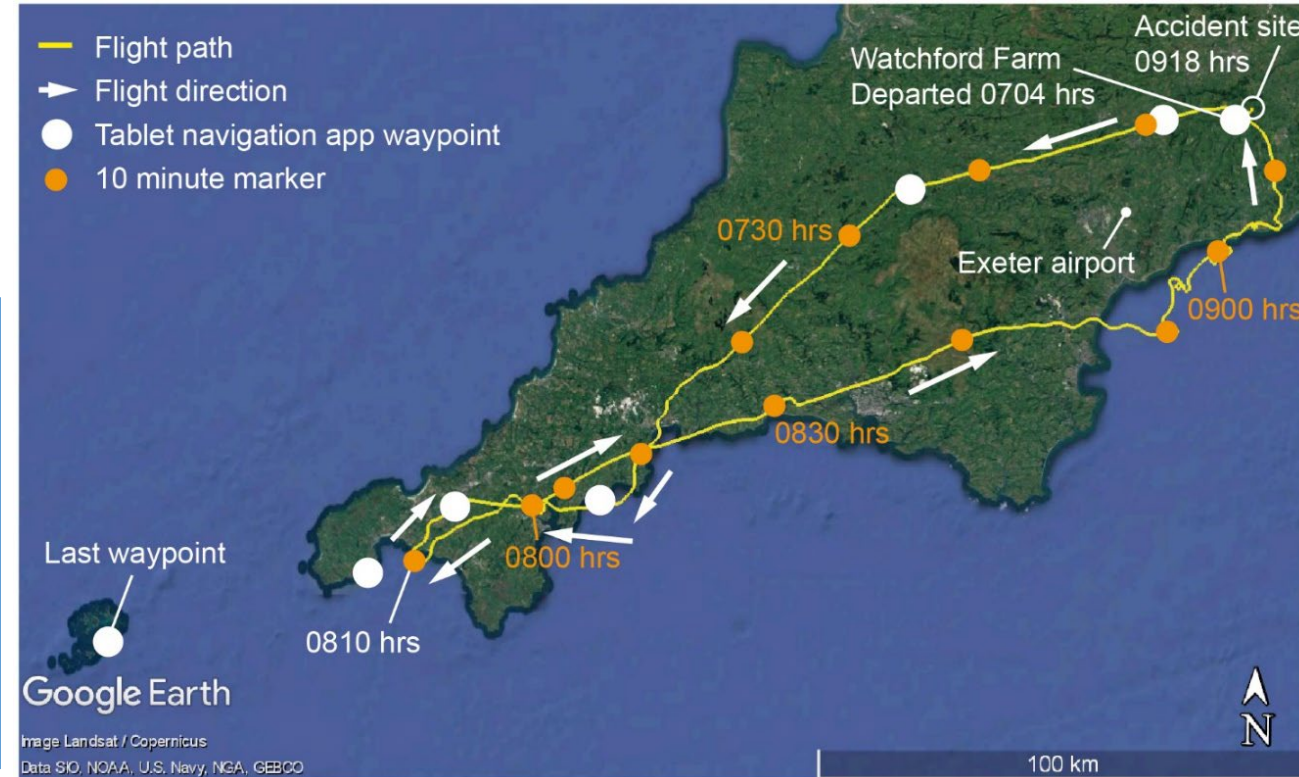
Lower Colley Farm, Buckland St. Mary, Somerset - 12 August 2021



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# The flight

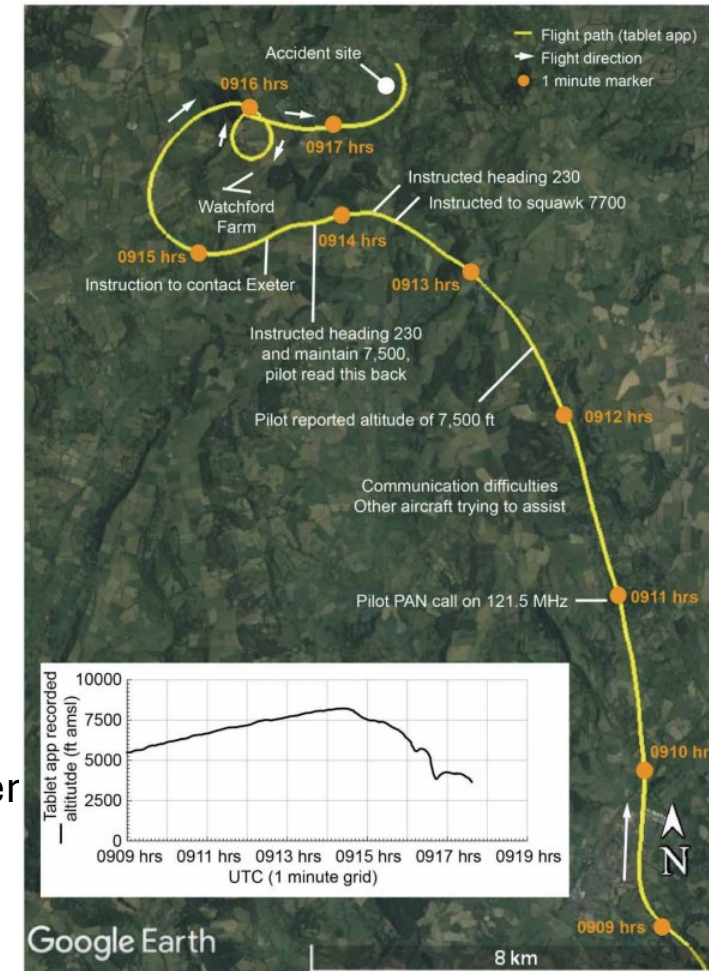
- Watchford Farm to Sicily Isles - Departure at 0704 hrs
- The pilot called declared an emergency at 0911 hrs on 121.5 MHz
  - Requested help and stated stuck above cloud
  - Needed to divert to somewhere where he could land
  - Confirmed the aircraft had fuel to fly for 90 minutes
  - Maintaining clear of cloud
- Simultaneous phone call from Exeter to D&D
- Exeter offered to take him
- D&D controller advised that Exeter were willing to accept him
- Descent began into cloud prior to contacting Exeter
- The pilot called Exeter Radar and restated his emergency status
- Exeter gave instructions for approach and landing
- Pilot was likely to have been flying in cloud, with high workload
- He probably became spatially disorientated and lost control of the aircraft at 0918 hrs





# History of the flight

- Initial phone call between D&D and Exeter - an assistant at Exeter to a D&D support controller
  - Primary reason was to provide update on military jet with technical issue
  - Secondary discussion around G-BXBU and the pilot's intentions
  - Exeter assistant did not identify herself as such on the phone
- D&D stated G-BXBU was stuck above cloud and wanted to divert
- D&D interpreted that a qualified ATCO was offering help
- D&D did not check the weather conditions at Exeter before transferring the pilot
- Cloud base at Exeter was 500 ft
- No radar handover was completed between D&D and Exeter
- No further information on the status of the aircraft's emergency was requested by Exeter
- There was no active decision by a qualified person for G-BXBU to divert to Exeter
- Exeter issued Instrument Approach procedures to the pilot

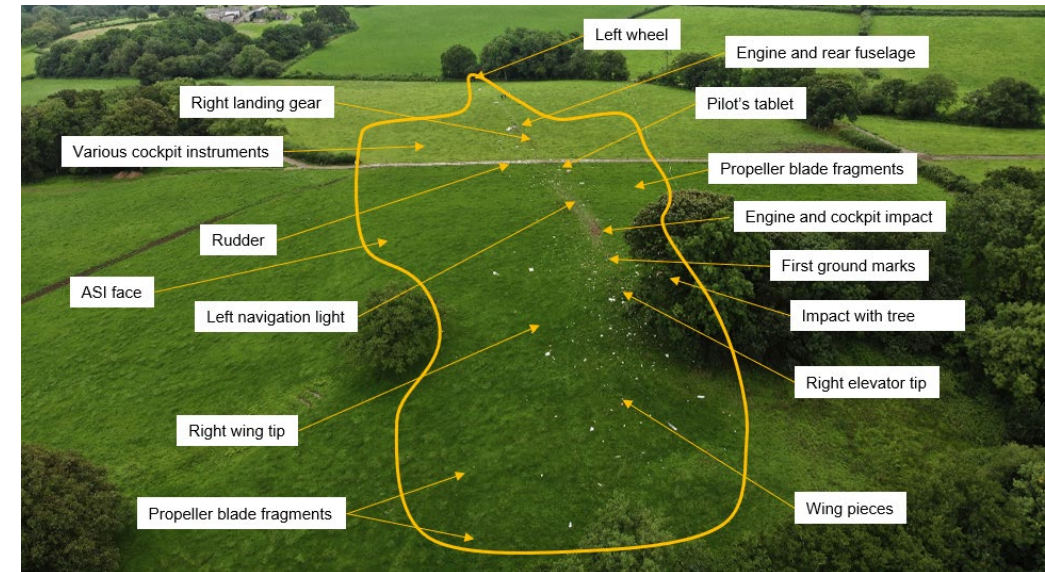


# The aircraft

- Avions Mudry CAP 10B
- 2 seat side by side
- Wooden aerobatic aircraft
- Built in 1980, rebuilt in 1994
- 4250 airframe hours
- Cruise speed of 120-150 kt
- $V_{ne}$  of 340 km/h (183 kt)
- Endurance of ~4 hours



- Wreckage laid out to ensure no significant items missing
- The continuity of the flight controls were verified
- All damage was probably sustained during the impact
- No evidence was found of any anomalies that would have prevented normal operation





- Decision to fly
  - Absence of complete pre-flight weather assessment
  - Available information did not show extent of poor weather

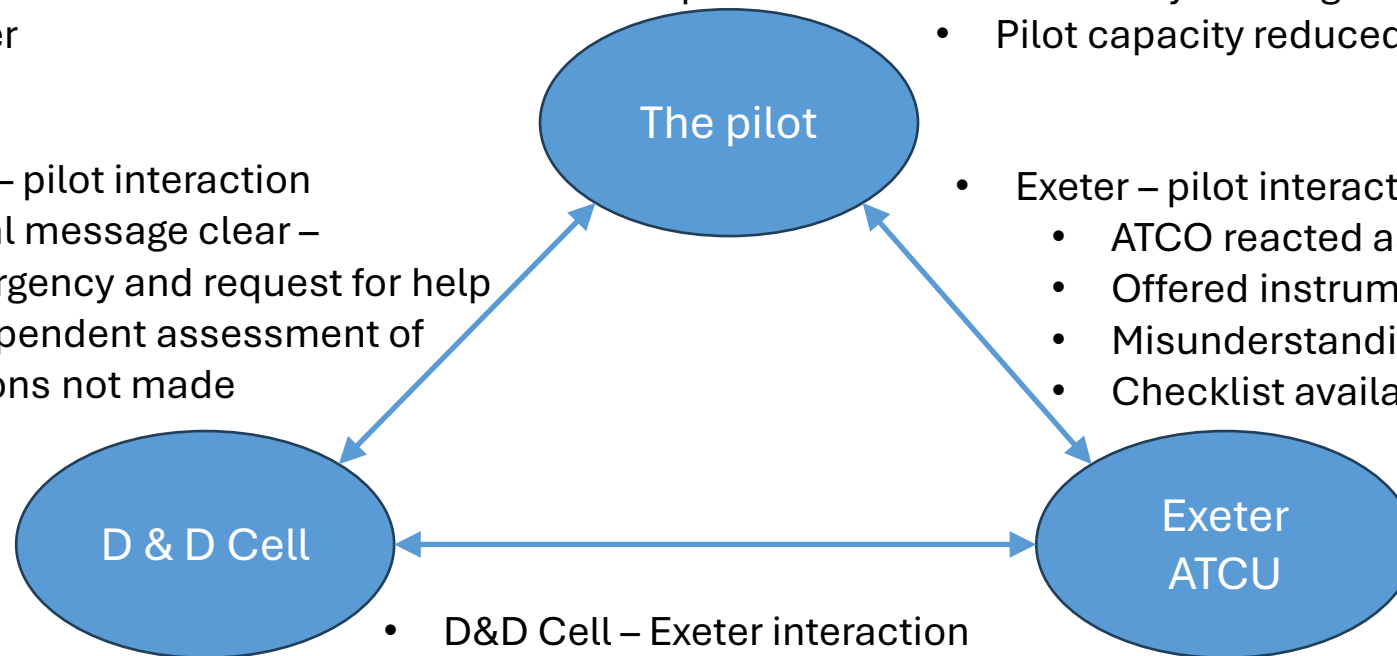
- In-flight decision making
  - Use of transponder and radio
  - Familiarity of using ATC Services
  - Pilot capacity reduced

- D&D Cell – pilot interaction

- Initial message clear – emergency and request for help
- Independent assessment of options not made

- Exeter – pilot interaction

- ATCO reacted as weather diversion
- Offered instrument approaches to Exeter
- Misunderstanding of pilot & aircraft capabilities
- Checklist available but not used



- D&D Cell – Exeter interaction

- Assistants were not aware other was not a licenced ATCO
- Exeter offered solution without full understanding of the problem
- Handover not completed

- State emergency aid structure

- Absence of formal agreement about service the D&D Cell should provide
- Ambiguous understanding of “Executive control”

- The aircraft collided with terrain because the weather conditions deteriorated beyond the capabilities of the pilot who was not trained or qualified to operate in poor weather
- The forecasts available when the pilot assessed the weather did not accurately reflect the extent of the poor weather and the pilot found himself stuck above cloud
- When the pilot requested assistance in finding an appropriate aerodrome to land, the level of ATC support from the D&D Cell and Exeter ATC was not sufficient to provide the assistance required by the pilot, who was in a state of distress.
- A breakdown in communication and teamwork occurred between the D&D Cell, Exeter ATC and the pilot, which led to miscommunication, incorrect assumptions and omission of critical information.
- Following published procedures would likely have allowed either the D&D Cell or Exeter Airport ATC to establish the unsuitability of Exeter Airport as a diversion aerodrome.
- The investigation identified shortcomings in the system in place in the UK to provide emergency support to aircraft in distress.

- Five Safety Recommendations were made to the UK CAA:
  - **SR 2023-011:** Publish on responding to unexpected weather deterioration, factors affecting their performance and the benefits of planning before the flight. **CLOSED**
  - **SR 2023-012:** Air traffic controllers to receive training regarding the human performance characteristics and limitations associated with stress. **On-Going G-BXBU Case study included in ATCO training**
  - **SR 2023-013:** Specify the types of information that air traffic controllers will obtain and record when responding to aircraft in an emergency. **On-Going Procedures being updated**
  - **SR 2023-014:** Encourage the use of checklists in air traffic management operations when dealing with abnormal and emergency situations. **On-Going Procedures being updated**
  - **SR 2023-015:** Determine the effect the D&D Cell's "executive control" has on civil ATCOs. **On-Going MATS Part 1 being updated to define functions and services offered by the D&D Cell and their interactions.**

- Two Safety Recommendations were made to the UK Department of Transport:
  - **SR 2023-016:** Review the current provision of emergency communications in the UK to determine if the involvement of a dedicated emergency air traffic service unit is the most effective way to assist civil aircraft in an emergency and publish its findings.
  - **SR 2023-017:** Specify and publish details of the emergency air traffic service it requires the D&D Cell to provide.
- DfT Review on-going and response to Safety Recommendations due early 2026
- Note on Safety Recommendations to the MAA:

*Operations with a solely military purpose are outside the scope of this investigation. However, the AAIB has considered the service provided by the D&D Cell to the civil aviation community on behalf of the State, and four Safety Recommendations are made to the Civil Aviation Authority in areas that should also be addressed by the MAA. Accordingly, the MAA has stated that it intends to address the intent of Safety Recommendation 2023-012, -013, -014, and -015 made to the CAA.*



# Questions???

