



## MINISTRY OF DEFENCE

### Military Aircraft Accident Summary

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Aircraft:	Hawk T MK1
Date of accident:	1 July 1993
Parent Airfield:	RAF Valley
Place of accident:	RAF Valley
Crew:	One Instructor Pilot One Post-grad Student Pilot
Casualties:	1 Major, 1 Minor

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#### Circumstances

1. A Central Flying School instructor briefed his student, a qualified Hawk pilot, for a sortie which was to include a practice turnback manoeuvre, following a simulated engine failure after take-off. This was a part of the training syllabus for the Central Flying School instructors' course.

2. Shortly after take-off, the student, occupying the rear seat, initiated the exercise, intending to carry out a roller landing on the reciprocal of the runway from which he had just departed. At 255 knots, he retarded the throttle to simulate an engine failure and executed a brief climbing turn to the left before reversing right. He achieved a maximum height of 1100 feet at 190 knots. His right turn, however, kept the aircraft close to the airfield but widely displaced from the runway centreline. Undercarriage and flaps were lowered whilst the aircraft was still in its right-hand turn. Although the aircraft's heading was still about 70 degrees off that of the runway, both pilots decided that a successful approach was still possible as they passed the decision height for the exercise of 300 feet.

3. At 260 feet and 172 knots, the student pilot commenced a left-hand turn towards the runway. Although he increased the aircraft's bank angle to 60 degrees, he could not prevent the aircraft from flying through the runway centreline. Nevertheless, the aircraft began to track back towards the runway centreline, and the pilot decreased the bank angle. It was at this stage that the instructor became aware of a high rate of descent, and overrode the controls. The student, who was still formally the handling pilot, being also aware of the rate of descent, applied full power but too late to prevent the aircraft from impacting with the ground.

4. The aircraft landed heavily on the left undercarriage, which collapsed. It settled wings level and caught fire as it slid along the runway. Both pilots, conscious of the smoke and flames around them, initiated independent ejections. The aircraft finally came to rest on the left hand edge of the runway. The fire was extinguished by the fire crews. Both ejections were successful, although the student's injuries were classified as major.

#### **Cause**

5. The accident was caused by the instructor pilot's failure to take control in sufficient time to overshoot successfully, and the student pilot's failure to recognise a dangerous approach and overshoot in good time.

#### **Subsequent Actions**

6. Turnbacks to the reciprocal runway following a simulated engine failure after take-off in the Hawk are no longer practised. The Central Flying School Examining Wing has been tasked with reviewing the minimum criteria necessary, in the event of an actual engine failure, to complete a safe forced-landing on the departure runway.