

No:

Ref: EW/C847

Aircraft type and registration: Bell 206A G-AVTE (light single jet-engined helicopter)

Year of manufacture: 1967

Date and time (GMT): 25 September 1983 at approximately 1020 hrs

Location: Mid Standard Hill, Balmclellan, nr New Galloway, Scotland

Type of flight: Instructional

Persons on board: Crew — 1 Passengers — Nil

Injuries: Crew — 1 (fatal) Passengers — N/A

Nature of damage: Aircraft totally destroyed

Commander's Licence: Private Pilot's Licence

Commander's Age: 20 years

Commander's total flying experience: 105 hours (of which 34 hours 45 mins were on the same type and class of aircraft)

The pilot was a foreign military student, who was undergoing an extended fixed and rotary wing flying course. He was briefed, and subsequently authorised, by an instructor to undertake his first solo helicopter navigation exercise, from Carlisle Airport to Eskdalemuir, New Galloway, and return to Carlisle. The forecast weather was obtained by means of an AFTN telex from Manchester, timed at 0530 hrs Z, and valid from 0600–1400 hrs Z within 30nm radius of Carlisle. The Automatic Telephone Answering Service (UK AIP Met 0-8) did not cover the area of the intended flight, and there was no record at Prestwick of a request for a route forecast. The authorising instructor observed that the weather at Carlisle was similar to that forecast, and was suitable for the initiation of the flight. The significant elements of the forecast that was obtained included the synopsis, which indicated that high pressure over Eastern England would slowly transfer south-eastwards, with higher dew point air advecting up its western flank. The surface wind was forecast as variable at 2 kt, becoming 190° to 250° at 6 kt; the 2,000 ft wind was variable at 10 kt, becoming 250° at 15 kt with the temperatures at that altitude rising from plus 6°C to plus 10°C during the period. Low cloud was forecast as mainly nil, with occasionally 3 oktas cumulus and strato-cumulus at 2,500 ft. Visibility was locally 5,000 m in low-lying mist, improving to 15 km.

Air Traffic Control (ATC) at Carlisle is only available during normal operating hours, Monday to Friday, and on request. There was no ATC cover on the morning of Sunday 25 September, and it is usual for resident and visiting pilots to broadcast their position or intentions on VHF/RTF. At 0945 hrs the pilot of G-AVTE call sign 42 broadcast 'FOUR TWO TAKE OFF FOR ONE NINE LEFT HAND CIRCUITS'. The next call from the aircraft was at 0947 hrs 'FOUR TWO DOWNWIND' which was followed by either 'BACK UP TO THE NORTH' or 'CONTINUE ... NORTH'. At 1003 hrs the pilot broadcast 'CARLISLE FOUR TWO I GOT SOME PROBLEM HERE TURNING NOW TO NEW GALLOWAY'. This is the last transmission heard from the aircraft.

The Bell 206 section of the helicopter course is strictly a VFR operation, and students are briefed that in the event of encountering deteriorating weather, if feasible, they should cut the corner to the next leg. If not, they should return via the outbound route, or in extremis, carry out a precautionary landing.

Witnesses on the track of the second leg of the route, between Eskdalemuir and New Galloway, saw a light coloured helicopter flying westwards at heights variously estimated at 200 ft to 1,000–1,500 ft agl, at the appropriate time. An eyewitness by Loch Urr (8nm north-east of New Galloway) saw a light coloured helicopter appear out of mist, flying south-westwards over the Loch at a height estimated as 200–300 ft agl; it then disappeared into further mist to the west. Another witness, approximately a mile to the south of Loch Urr, heard a helicopter fly overhead in a

westerly direction, but was unable to see it, due to low cloud cover. Both of these witnesses describe sounds, and a cessation of engine and rotor noise, consistent with the known impact sequence. It was not possible to ascertain an accurate time at which this event occurred. Further witnesses, 1nm south-east of the accident site and on the required track, saw a helicopter fly overhead in the direction of New Galloway. It was lower than usual, and disappeared behind a low hill to the west with the sound of the aircraft fading normally, and they heard nothing further. They also noted that the high ground round the Blackcraig Hill area was covered by cloud.

At 1055 hrs the instructor called the aircraft on a portable ground RTF set, on the Carlisle common approach and tower frequency of 123.6 MHz, but there was no reply. This frequency was found selected on the VHF communications radio in the wreckage.

At 1100 hrs, another student took off on the same navigational exercise, but returned 20 minutes later because of the poor en route weather. Enquiries were commenced, and it was ascertained that G-AVTE had not been in contact with any Scottish ATC units. The Rescue Co-ordination Centre (RCC) at RAF Pitreavie Castle was alerted, and overdue action commenced. A number of helicopters carried out an aerial search shortly after 1200 hrs. They were later supported by units of the RAF Mountain Rescue Team, police, and other organisations, which engaged in a land search. Poor weather, comprising, mainly, low cloud and hill fog, seriously impeded the search, with the result that the aircraft was not found until the following day, at 1300 hrs, by a Mountain Rescue Team, 43nm from Carlisle.

The aircraft struck a ridge of high ground known as Mid Standard Hill, running south-west to north-east between Traquhain Hill and Blackcraig Hill, the latter rising to a height amsl of 1,332 ft. The point of impact was 1,150 ft amsl on the south-eastern face of the ridge. At the moment of impact the aircraft was heading approximately 035° (M) and was pitched nose up some 30° , with an angle of bank to the right approaching 25° . The en route magnetic track at this point is 258° . Analysis of the ground marking and scoring, and the wreckage distribution, suggests that the aircraft had been developing a significant amount of power which was being transmitted to the main and tail rotors. The airspeed on impact had been in the region of 100 kt. The aircraft had then disintegrated and caught fire, the pilot being ejected forwards and away from the main wreckage and sustaining fatal injuries. Pathological evidence revealed no medical condition that could have had a bearing on the accident.

Subsequent examination of the wreckage produced no indication of a malfunction or failure which could have contributed to the accident.