

AIRPROX REPORT No 2011104

Date/Time: 2 Aug 2011 1001Z

Position: 5108N 00201W (10nm W
Boscombe Down)

Airspace: LFIR/LFA1 (Class: G)

Reporting Ac Reported Ac

Type: Bolkow Bo207 Squirrel x 2

Operator: Civ Pte AAC

Alt/FL: 150ft↓ 100ft
aal agl

Weather: VMC CLOC VMC CLBC

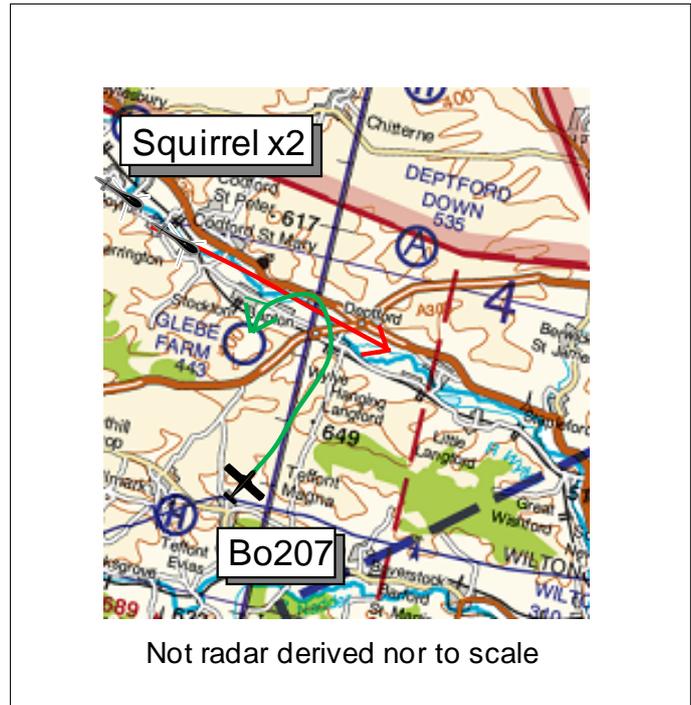
Visibility: >10km 30km

Reported Separation:

50-100ft V 800m H

Recorded Separation:

NR



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

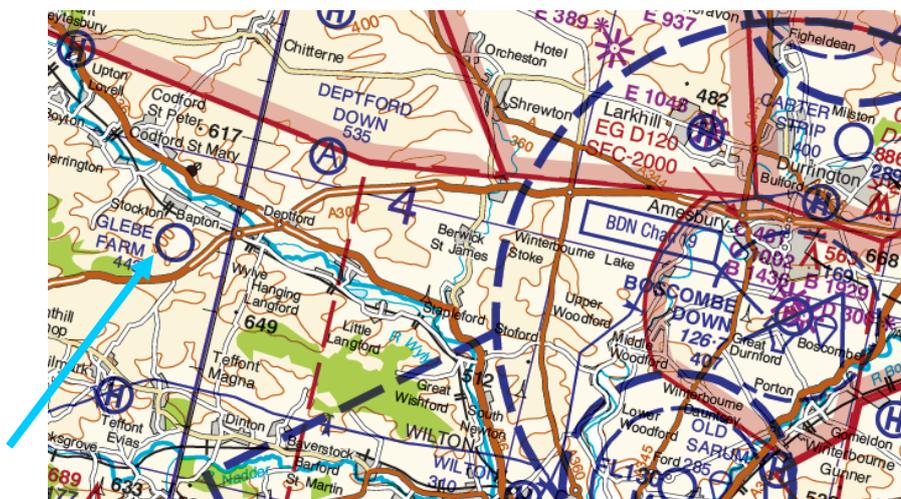
THE BO207 PILOT reports inbound to a private site at Stockton (Glebe Farm) VFR and in receipt of a BS from Boscombe Zone on 126.7MHz, squawking 2650 with Mode S and C. The visibility was >10km in VMC and the ac was coloured blue/white with strobe and landing lights switched on. He was very familiar with Glebe Farm with its surrounding unusual topography and had frequently seen AAC helicopters using the valleys around 3 sides of the airstrip for training. When Glebe Farm is active a windsock is flown and the strip is used almost exclusively in association with maintenance activities – arriving/departing ac or those on air test. On this occasion the airfield operator was on site, had raised the windsock and had also telephoned the Bo207 pilot on the ground, prior to his departure from Thruxton, to warn him that there were helicopters in the area. He had worked Boscombe Down for ‘clearance’ through the MATZ at 2000ft and had reported Glebe Farm in sight and commencing descent. He descended to approximately 800ft aal and overflew the RW at the mid-point, carefully checking the surrounding valleys for helicopters; none were seen so he flew a LH cct. On final Boscombe Down cleared him to change squawk to 7000 and change to en-route frequency. He acknowledged the call but as he was in the final approach phase he did not change his transponder code, which was retained until after landing. On short final heading 220° at 70kt descending through 150ft aal he just caught sight of a Squirrel passing 50-100ft beneath his ac tracking R to L at 90° to his flightpath. He also had a better sighting of a second helicopter 150-200m to his R following the first at the same height. He thought that the second helicopter may have taken some corrective action by reducing speed. He assessed the risk as high. The incident was observed by the airfield operator, an experienced pilot, who, because of the sloping nature of the RW [uphill RW20 elev 443ft amsl], was at the same height as the helicopters.

THE SQUIRREL NO 2 PILOT reports conducting a low-level tactical pairs sortie, VFR and listening out on Low Flying Common frequency squawking with Mode C. The visibility was 30km clear below cloud in VMC and the ac’s strobe and nav lights were switched on. At 1000 they departed their battle positions [2.25nm WNW Glebe Farm airstrip] and he noticed a small fixed-wing ac climbing out from the airstrip heading S. As he was flying the trail helicopter of the pair, he indicated the fixed-wing ac to the formation Leader who acknowledged and pushed further N into the Wyle Valley; the light ac looked as if it was departing the area. While following about 2000m behind the lead helicopter heading 070° at 100kt the fixed-wing ac turned towards them whilst on base leg and started to

descend. The lead helicopter, which was at 100ft agl, as per the pre-briefed sortie profile, pushed further N at the village of Stockton [~0.5nm N of airstrip] to avoid conflict. The lead pilot estimated being 800m from the fixed-wing when it turned final. During the post sortie debrief the fixed-wing ac was mentioned but neither he nor the formation leader saw any conflict and were happy with their deconfliction actions. He assessed the risk as low.

UKAB Note (1): The UKAB Secretariat attempted to contact the Squirrel No2 pilot, albeit 4 months post incident, to discuss the disparate separation distances reported. After eventually establishing that the pilot was no longer employed, the No1 pilot was identified and contacted. The Lead pilot could not remember much about the incident but confirmed the Bo207 was pointed out to him by his No2 when it was O/H or downwind for Glebe Farm, about 800m away and he altered his flightpath further N towards the bottom of the Wylie Valley. He remembered seeing it again later when it was to his R, behind and above after he was well past Glebe Farm strip. He could not give an estimate of separation or the exact geometry at the CPA.

BM SAFETY MANAGEMENT reports this Airprox occurred between a pair of Squirrels operating VFR in LFA 1 and a Bolkow 207 operating VFR making an approach to a private airstrip at Stockton (Glebe Farm).



The Bolkow 207 pilot reports being in receipt of a BS from Boscombe Zone until shortly before the incident (the service was terminated at 1000:13); however, Zone recalls no incident occurring over that time period and that their workload was low, a fact borne out by the tape transcript. Given this low workload, it is likely that had Zone seen the Squirrel formation on radar, they would have provided TI if they had perceived a risk of collision.

Glebe Farm airstrip is on high ground, surrounded on 3 sides by valleys and, based upon the report supplied by the Squirrel crew, the Squirrel formation were operating within these valleys at 100ft AGL. It is reasonable to argue that the topography and operating height of the Squirrel formation would have prevented the detection of the formation on radar. Given this, the ATM-related safety barrier was unable to operate leaving “see and avoid” as the sole remaining mitigation. The Squirrel formation’s crew report being visible with the Bolkow 207 throughout the incident sequence and deconflicted themselves accordingly.

HQ AAC comments that the Squirrels were visual with the Bo207 and maintained a safe margin of separation. Both parties involved appear to be conducting themselves in accordance with current guidance and practice of good airmanship within Class G airspace. This is an unfortunate hazard of operating in an area of a high concentration of mixed GA and military ac in the low level environment.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

It was clear that there were different cockpit viewpoints of the incident. The Squirrel pair were flying at very low level (100ft agl) and their crews had the better opportunity to see the potential conflict as the Bo207 would have been sky-lined while flying its O/H join and visual cct. The Squirrels would have been very difficult to see from the Bo207 cockpit; a predominantly dark helicopter flying low against a dark background. Members agreed that the Squirrel crew had seen the Bo207 early on (most likely during its O/H join) as it formed a cct pattern for Glebe Farm airstrip and they had, quite sensibly, elected to move further N into the Wylie Valley. The crews initially thought the Bo207 was departing the area but when they saw it then turn onto a base leg and commence descent towards their projected flightpath they pushed further to the N, towards Stockton village, to deconflict their flightpaths laterally. The Bo207 pilot reported that while on final at 150ft aal, while concentrating on his approach and landing, he saw a Squirrel helicopter pass close beneath his ac followed by a second one in trail. Members sympathised with his predicament and understood his concern at being 'underflown' on short final at a critical stage of flight. The Bo207's approach to the uphill strip meant that it was crossing much lower ground in the Wylie Valley on final and although the Bo207's height was not far above the airstrip whilst on short final, there was a vertical gap beneath it for the helicopters to pass. Members noted the disparate separation distances reported by pilots involved but were confident the correct ac had been identified. The Board accepted that as the Bo207 descended on its final approach the minimum the vertical separation was around 50-100ft and it seemed likely that the trailing Squirrel was closer than 2000m to his leader for the Bo207 pilot to be able to see it. It was unclear to Members whether the Squirrel crews had maintained visual contact with the Bo207 throughout. The HQ AAC Advisor explained that the crews would have attempted to monitor the Bo207's progress as much as possible; however, they would have been concentrating on their low-flying tactical task. From the information available, the Board believed the Squirrel crews had monitored the Bo207's flightpath sufficiently and taken timely action to remove the collision risk but had flown close enough to cause the Bo207 pilot concern.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Squirrel flight flew close enough to cause the Bo207 pilot concern.

Degree of Risk: C.