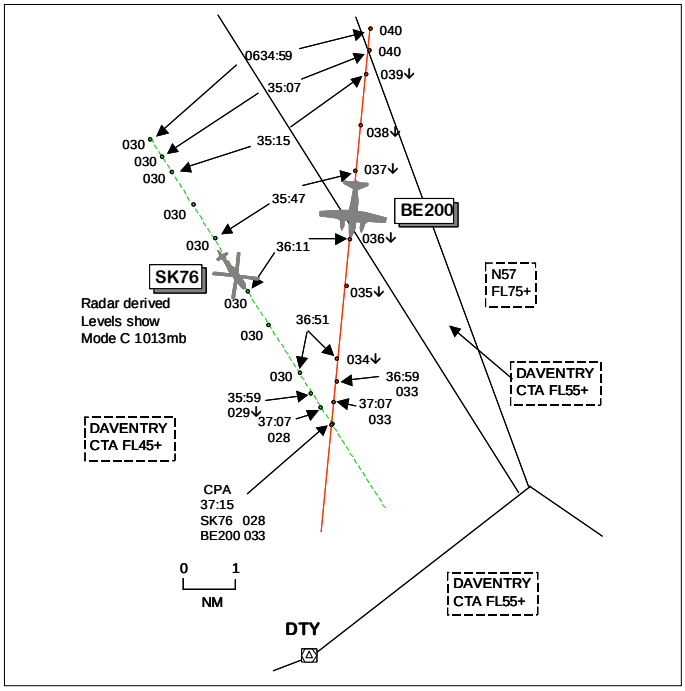
AIRPROX REPORT No 2010134

Date/Time:	14 Sep 2010 0637Z	
Position:	5215N 00106W (4·5nm N DTY)	
Airspace:	LFIR	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	SK76	BE200
Operator:	Civ Pte	Civ Exec
Alt/FL:	3000ft (QNH)	FL40↓
Weather:	IMC IICL	VMC CLAC
Visibility:	<1000m	8km
Reported Separation:	300ft V/Nil H	NR
Recorded Separation:	500ft V/Nil H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE SK76 PILOT reports en-route to Battersea, IFR and in receipt of a TS from Birmingham Approach on 118·05MHz, squawking 0403 with Modes S and C; TCAS 1 was fitted. The flight conditions at 3000ft QNH were IMC in and out of cloud with visibility <1000m. About 3nm NW of DTY VOR, heading 160° at 145kt, they noticed TCAS traffic >5nm away indicating 700ft above and descending on a converging course from the port side. Shortly after this Birmingham advised that there was a contact in their "10 o'clock at a similar altitude", he thought. After monitoring events for a short while they elected to take avoiding action and commenced a descent whilst trying to locate the threat ac. They also requested a "radar steer to avoid" from ATC who responded with an instruction to steer "radar heading 210°". They then observed a white coloured King Air fly O/H, wings level at a TCAS height of +300ft. Throughout their manoeuvre the conflicting ac appeared on TCAS to be maintaining a shallow descent. They declared an Airprox and asked Birmingham ATC to log the time and event. ATC advised that the conflicting ac was squawking 7000 and not working their frequency. He assessed the risk as high without avoiding action.

THE BE200 PILOT reports en-route to Oxford initially VFR squawking 7000 with Modes S and C; TCAS 1 was fitted. Prior to departure he had telephoned Oxford for their latest Wx and had then set course VFR via DTY. He initially received a BS from East Midlands, which was converted to a TS when he entered cloud and was cleared through East Midlands CAS IFR. N of DTY flying at FL40 between layers he terminated service with East Midlands and called Coventry for TI but received no reply. He listened to Oxford ATIS and prepared to contact them on 125·325MHz; a slow descent was initiated. Heading 190° at 200kt approaching DTY a TCAS TA was generated so he stopped his descent. Flying 200ft above cloud between layers in VMC with 8km visibility nothing was seen. He contacted Oxford and after landing was asked if he had seen a helicopter in the DTY area to which he replied, "only on TCAS".

THE BIRMINGHAM RADAR 1 CONTROLLER reports the SK76 was under a TS at 3000ft outside CAS. As the helicopter approached DTY he passed TI on unknown traffic squawking 7000 in the SK76's 10 o'clock range 2nm crossing from L to R indicating 3700ft. The SK76 crew asked about the traffic stating it was on TCAS in their 9 o'clock. At this stage the traffic appeared to be in the helicopter's 11 o'clock at <1nm and still in a descent, identifying the position accurately was difficult owing to the nature of primary contact. The SK76 crew reported that they were not visual and asked for a vector to keep clear. He again passed the position of the traffic and gave a R turn to avoid. At

this point the SK76 crew reported visual with the traffic and stated they would be filing an Airprox report as they believed there to be <300ft separation.

ATSI reports that the Airprox occurred at 0637:12, in Class G airspace, 4·5nm N of DTY VOR, between a SK76 and a BE200.

The SK76 was on flight from a private site near Uttoxeter to Battersea Heliport. The SK76 flight initially called East Midlands Radar and was transferred to Birmingham Radar prior to the Airprox where it was in receipt of a TS. The pilot's written report indicates that the SK76 was operating IFR.

The BE200 was on a flight from Gamston to Oxford. The BE200 flight initially called East Midlands Radar for transit through their zone and was then transferrred to Oxford Approach. Oxford do not have surveillance equipment capability. The BE200 reported changing to IFR and was placed under a PS just prior to the Airprox.

The METAR observation for Oxford was not available. East Midlands and Birmingham are provided:
METAR EGNX 140620Z 22016KT 9999 -RA BKN009 SCT042 17/15 Q1013=
METAR EGBB 140620Z 22011KT 190V260 6000 -RA FEW009 BKN029 6/15 Q1014=

At 0620:10 the SK76 crew called East Midlands Radar routeing direct to BNN, climbing to 3000ft on QNH 1013 and squawking 7000. The SK76 flight was instructed to squawk 4550 and at 0620:49 the radar recording shows the SK76 change squawk 17·5nm to the WNW of East Midlands Airport and indicating FL030. A BS was agreed and at the request of the pilot this was later updated to a TS.

At 0620:50 the BE200 flight called East Midlands Radar, and reported VFR, en route from Gamston to Oxford, levelling at altitude 4000ft VMC, requesting a BS and transit through the East Midland Zone towards DTY. The BE200 crew was instructed to squawk 4551 with QNH 1013. At 0622:01 radar recording shows the BE200 23·4nm NNE of East Midlands Airport, indicating FL040. A BS was agreed and the BE200 crew was given clearance to transit the East Midlands Airspace at 4000ft on QNH1013. As the BE200 left East Midlands CAS, a TS was agreed.

At 1632:30, the SK76 flight was transferred to Birmingham and the radar service was terminated. At 1632:38 the radar recording showed the distance between the 2 ac was 9·8nm with tracks slowly converging. The SK76 indicated FL030 and the BE200 indicated FL040. Shortly afterwards the BE200 reported 16nm to run to DTY and requested a frequency change to Oxford. East Midlands Radar advised the BE200 to squawk 7000 and free call en-route.

The SK76 flight established contact with Birmingham at 0633:05 and reported on a squawk of 7000, due E of the Coventry NDB (CT) at 3100ft on QNH 1013. The flight rules under which the SK76 was operating were not established. The SK76 crew was instructed to squawk 0403 and at 0633:45, Birmingham Radar identified the SK76, 5nm E of the CT. A TS was agreed.

At 0634:55 the BE200 flight contacted Oxford Approach and reported inbound from Gamston, routeing towards DTY and requesting a straight in approach for the ILS RW19 with QNH 1016. Oxford acknowledged the call and agreed a BS passing a new QNH 1015.

At 0635:07, Oxford Approach instructed the BE200 crew to make a straight in approach RW19 ILS and to report LLZ established. The BE200 crew reported at altitude 3800ft descending to 3000ft and requested an upgrade from VFR to IFR. At 0635:46 Oxford agreed a PS and instructed the BE200 flight to descend not below 2300ft on QNH 1015.

At 0636:11 Birmingham Radar advised the SK76 flight of unknown traffic, *"and (SK76)c/s there's unknown traffic in your left ten o'clock range of two miles indicating three seven in the descent unverified.*" Radar recording shows the BE200 to be in the SK76 helicopters half past nine position at a range of 2·2nm, with the SK76 indicating FL030 and the BE200 indicating FL037. The SK76 pilot replied*, "er (SK76)c/s er we've got TCAS in about our left er nine o'clock would that be the traffic."* Birmingham Radar responded, *"Yeah looks more like your eleven o'clock though."*

Shortly afterwards at 0636:51, the radar recording shows the 2 ac converging at a range of 0·8nm with 400ft vertical separation as the BE200 continued a slow descent. The SK76 pilot reported, *"er (SK76)c/s I'd er like some help with that separation please we don't have him visual."* Birmingham Radar advised, *"and (SK76)c/s looks like he's crossing you left to right so if you make a er right turn now a radar heading of er two one zero degrees."* At 0637:05 the SK76 pilot replied, *"Radar heading two one zero degrees and we're in the descent we got that aircraft visual he's clearing us by about three hundred feet ????."* Birmingham Radar acknowledged*, "(SK76)c/s that's understood if you're visual you can resume own navigation."*

At 0637:15, the radar recording shows the 2 ac merging, with the SK76 now indicating FL028 and the BE200 indicating FL033. Shortly afterwards the SK76 pilot advised of the intention to file an Airprox and requested information on the other traffic.

The BE200 pilot was advised of the Airprox after landing and indicated that the other ac had not been sighted, but confirmed that it was monitored on TCAS 500ft below.

The SK76 pilot was in receipt of a TS from Birmingham Radar and was provided with TI to assist the pilot in avoiding the other traffic. At a late stage the SK76 pilot requested assistance with separation. The pilot did not request a change of service and there was insufficient time for the Birmingham Radar controller to upgrade the level of service. The Manual of Air Traffic Services Part 1, Section 1, Chapter 11, Page 5, Para 4.1.1 states:

> 'A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the avoidance of other traffic is ultimately the pilot's responsibility.'

The BE200 was provided with a PS just prior to the time of the Airprox. Oxford Approach, were not aware of the SK76 helicopter and were unable to provide TI. The Manual of Air Traffic Services Part 1, Section 1, Chapter 11, Page 10, Para 6.1.1 states:

> 'A Procedural Service is an ATS where, in addition to the provisions of a Basic Service, the controller provides restrictions, instructions and approach clearances, which if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.
> A Procedural Service does not require information derived from an ATS surveillance system. Therefore, due to the ability for autonomous flight in Class F/G airspace, pilots in receipt of a Procedural Service should be aware of the high likelihood of encountering conflicting traffic without warnings being provided by ATC.'

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 authorities.

With both flights operating within Class G airspace, both crews were responsible for maintaining their own separation from other traffic. Although both flights had previously been working East Midlands, they had then contacted different ATSUs. At the time of release, the ac were both tracking towards the DTY area but separated by 1000ft. Thereafter the SK76 flight had called Birmingham and received a TS whilst the BE200 flight had called Oxford, after unsuccessfully calling Coventry, and accepted a BS before upgrading to a PS as he descended. Pilot Members believed that as the Wx appeared to have been marginal for VFR flight, the BE200 pilot would have been better placed if, in

his pre-flight planning, he had planned to use radar equipped ATSUs prior to Oxford – Coventry had no ATC available at the time of the Airprox. Both crews were aware of each other's presence from TCAS whilst the SK76 crew's SA was supplemented with TI from Birmingham. Members thought that the SK76 crew had been right to ask for an upgraded service but they had left it rather late in the evolution, leaving the Birmingham controller fewer options to resolve the confliction. The BE200 pilot had also upgraded to a PS from Oxford; however, Oxford APP, being a non-radar ATSU, was unaware of the SK76's presence. Both crews had seen the deteriorating situation and acted in the vertical plane to resolve it, the BE200 pilot arrested his descent while the SK76 crew commenced a descent and saw the BE200 as it crossed above. The Board unanimously agreed all parties had acted appropriately throughout and that this Airprox had been a conflict between IFR flights which had been resolved by the combined actions of both crews with the assistance of TCAS and ATC, thereby removing any risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict between IFR flights resolved by both crews with the assistance of TCAS and ATC.

Degree of Risk: C.