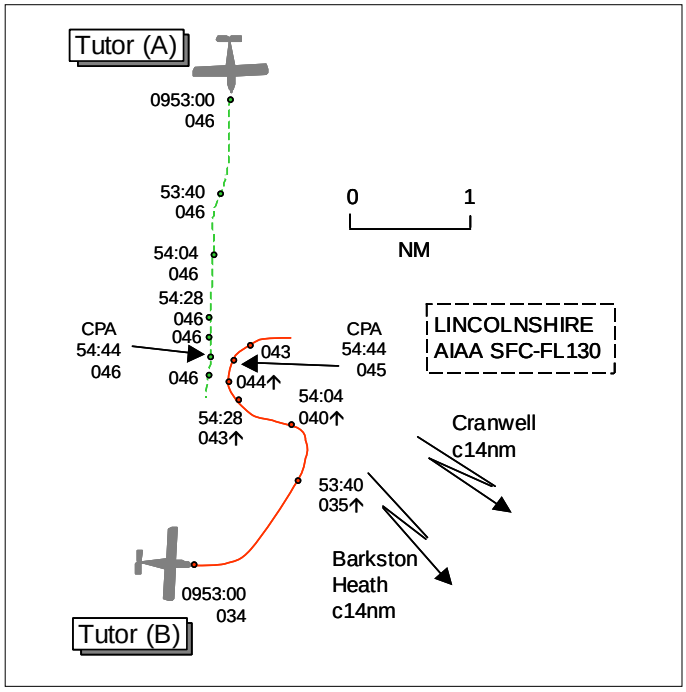
AIRPROX REPORT No 2010044

Date/Time:	16 Mar 2010 0955Z	
Position:	5309N 00050W (4nm N Newark-on-Trent)	
Airspace:	Lincolnshire AIAA (*Class: G*)	
	Reporting Ac	*Reported Ac*
Type:	Grob Tutor(A)	Grob Tutor(B)
Operator:	HQ AIR (TRG)	HQ AIR (TRG)
Alt/FL:	4800ft (RPS 1020mb)	4500ft (RPS 1020mb)
Weather:	VMC CLBC	VMC CLBC
Visibility:	25km	30km
Reported Separation:	Nil V/100yd H	Nil V/200m H
Recorded Separation:	100ft V/0·2nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE GROB TUTOR (A) PILOT reports conducting a QFI training sortie from Barkston Heath and listening out on 282·6MHz, squawking 2637 (Cranwell conspicuity code) with Modes S and C. The visibility was 25km flying 500ft below cloud in VMC and the ac was coloured white with HISLs switched on. About 3nm NW of Newark heading 180° flying straight and level at 4800ft Barnsley RPS 1020mb, another Tutor was seen in his 10 o'clock range 100yd in a steep RH turn to the E. No avoiding action was taken as the other ac carried out the appropriate manoeuvre, passing 100yd away at the CPA. He assessed the risk as very high. He went on to say that the vision from his ac was poor as the opposing ac was shielded behind the canopy arch and it also blended in with the background cloud of a similar colour to the Tutor. Also his harnesses were tight which made looking around the canopy arch more difficult.

THE GROB TUTOR (B) PILOT reports flying as a solo student from Cranwell operating in the Cranwell NW sector and in communication with Barkston Director, he thought, on 282·6MHz, squawking 2637 with Modes S and C. The visibility was 30km flying 1000ft below cloud in VMC and the ac was coloured white with strobe, nav and landing lights all switched on. He had been authorised for aerobatics but did not conduct them owing to the cloud base. Instead he elected to conduct GH along the river Trent N-S at 4500ft RPS 1020mb between Newark and a disused power station 10nm N of Newark in the Trent Valley. About 5nm N of Newark heading N at 100kt he saw a Tutor conflicting in his 11 o'clock range 300m heading S at the same level, although no immediate threat was apparent. However, separation closed to within 200m so he made an avoiding action R turn onto E and, once level, re-established visual contact. The other ac was by then no threat heading in the opposite direction. He assessed the risk as low.

HQ AIR BM SAFETY MANAGEMENT reports that initial investigation showed that frequency 282·6 MHZ is published as Barkston Director, operated by RAF Cranwell ATC; however, this was being used as a discrete frequency for operators and no ATS was being applied to this ac at the time of the incident.

HQ AIR (TRG) comments that this Airprox occurred in good visibility within the Lincolnshire AIAA. Both crews should have seen each other earlier than they did but it was the pilot of Tutor (B) who saw Tutor (A) with sufficient time to take effective and appropriate avoiding action.

UKAB Note (1): The Claxby radar recording clearly captures the incident. At 0953:00 Tutor (A) is seen tracking S level at FL46 (4810ft RPS 1020mb) with Tutor (B) in its 12 o'clock range 3·9nm tracking E level at FL34 (3610ft RPS). Tutor (A) continues generally S maintaining FL46 whilst Tutor (B) turns NE'ly and is seen to commence a climb and a L turn at 0953:40 before rolling out on a W'ly track 24sec later, climbing through FL40 (4210ft RPS); lateral separation is 1·5nm. Just over 30sec later at 0954:28 Tutor (B) is turning R through a NW'ly heading, climbing through FL43 (4510ft RPS) in Tutor (A)'s 1130 position range 0·7nm. The next sweep 8sec later shows Tutor (B) turning through N climbing through FL44 on the same relative bearing from Tutor (A) at a range of 0·4nm. The CPA occurs on the next radar sweep at 0954:44 with the subject ac passing port to port range 0·2nm, Tutor (B) still turning R and indicating FL45 (4710ft RPS), 100ft below Tutor (A). Tutor (B) is then seen to diverge rapidly and descend 200ft shortly before steadying on an E'ly track.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar video recordings and reports from the appropriate ATC and operating authorities.

Members could add little to this incident. Within the Lincolnshire AIAA Class G airspace both crews had equal responsibility to maintain separation from other ac through see and avoid. The comments made by Tutor(A) pilot with respect to the canopy arch and his harness affecting his lookout scan were noted. However, known factors such as these should be alleviated by either moving the ac's flightpath or the pilot's head to clear the 'blind areas'. The possibility of replacing the fixed harness with an adjustable one, a type which was fitted to the T67M Firefly fleet, is an issue which is being investigated by HQ Air. The Tutor's colour and the ability to visually acquire an ac against a backdrop of cloud may have also added to the situation. Nevertheless, in light of the good visibility and with both ac below the main cloudbase, Members agreed that there had been ample opportunity for both crews to acquire visually each other's ac for some time prior to the CPA. However, Tutor(A) crew only saw Tutor(B) an estimated 100yd away as it passed down their LHS, effectively a non-sighting, whilst Tutor(B) pilot saw (A) late, 300m away, and elected to continue briefly before executing a R turn to avoid, estimating 200m separation. The radar recording revealed that actual separation was about 0·2nm, 400yd and the HQ Air Training Member thought that with the geometry that pertained, Tutor(B) pilot should have taken action earlier instead of waiting. That said, although Tutor(A) crew were undoubtedly surprised by the appearance of Tutor(B), the Board believed that earlier sighting and robust actions taken by Tutor(B) pilot had been effective in removing any risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively a non-sighting by Tutor(A) pilot and a late sighting by Tutor(B) pilot.

Degree of Risk: C.