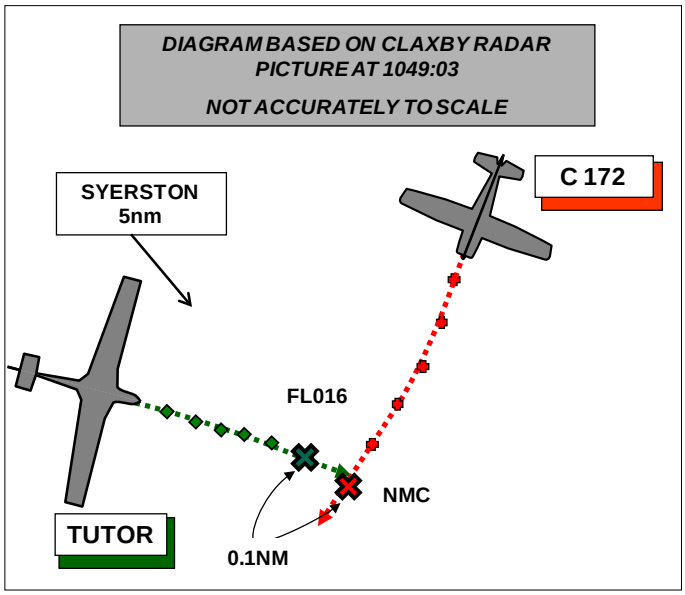
AIRPROX REPORT No 2011005

Date/Time:	28 Jan 2011 1049Z	
Position:	5310N 00100W (5nm NW Syerston)	
Airspace:	Lon FIR	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	Grob Tutor T Mk1	C172
Operator:	HQ AIR (Trg)	Civ Pte
Alt/FL:	1500ft (RPS 1022mb)	2000ft (QNH)
Weather:	VMC CLBC	VMC CAVOK
Visibility:	10km	>10km
Reported Separation:	150ft V/250ft H	200ft V/20m H
Recorded Separation:	NR V (est 350ft) /0.1nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TUTOR PILOT reports flying an instructional sortie in a white ac with all lights switched on, initially in receipt of a BS from Waddington ZONE, with the student as handling pilot. They were 5nm NW of Syerston, heading 100° in the climb out from a PFL and passing 1300ft when he (the instructor) cancelled the BS and changed freq to Cranwell APP. Passing 1700ft and before gaining contact with Cranwell, the student pilot pushed forward abruptly and reported an ac above, he gained visual contact with the ac, 400ft away, by moving his head forward and right to clear the area obscured by the canopy arch then took control, noting the height as being 1650ft. The conflicting ac was a white high-wing Cessna with a blue registration mark and was in straight and level flight heading about 195° and he assessed the vertical separation to be 150ft.

He reported the Airprox to Cranwell APP and confirmed with them by telephone after landing, assessing the risk to be high.

THE CESSNA 172 PILOT reports flying blue and white ac on a private, VFR cross country flight, at the time in receipt of a BS from Waddington [ZONE on VHF] while heading of 210° at 105kt. On their return to Nottingham from a turn point near Gainsborough, in a level cruise at 2000ft (QNH), they were informed by Waddington of traffic in their 2 o'clock at a 1000ft and he quickly made visual contact with the ac. He identified the ac as a Grob Tutor which he knew would not be on a VHF frequency and so they would not be able to hear transmissions to or from him, but he noted that the Tutor was much higher than Waddington stated at around 1800ft. Being fully visual and aware of the ac's flight path he didn't feel that there was any need to change his heading or height and considered that there was no collision risk at any time; he assessed the risk as being low.

HQ 1GP BM SM commented that both ac were initially working Waddington ZONE; however the Tutor reports switching freq to Cranwell APP shortly before the incident.

The tape transcript from Waddington ZONE indicates that the controller had a steady flow of traffic with 4/5 speaking units and in the absence of a report to the contrary, it is assumed that he was comfortable with the level of traffic.

The Cessna pilot called ZONE at 1016:24 and requested a BS; the controller assigned a squawk and applied BS. At 1018:01 the Tutor pilot also called ZONE requesting a BS; again a squawk was

issued and a BS applied. ZONE passed unrelated TI to both ac well before the incident indicating that when workload permitted, regardless of the service being provided, he was passing TI to BS ac in a busy portion of airspace. The controller continued to pass information to other ac, including TI and airfield information, until at 1048:05, when the Tutor reported complete and was instructed to squawk 7000. At 1048:28 the tape transcript shows that TI was passed to the C172 pilot on an ac at 12 o'clock half a mile crossing right to left indicating 1600ft. At that point on the radar recording shows the Tutor in the C172's 2 o'clock, indicating 1300 ft climbing; when the Tutor was passing 1600ft it was still in the C172's 2 o'clock. When the Tutor was about half a mile from the C172 in its 12-1 o'clock the C172 turns right towards it.

It is thought that there is a small discrepancy between the radar recording timings and the tape transcript clock. Taking this into account, although is not required under the provision of a BS, the TI was accurate enough to achieve the controllers intent, which was to warn the pilot and provide sufficient information to enable him to resolve the confliction; in the event it enabled the C172 pilot to gain visual contact with the Tutor.

It is clear from the controller's action prior to and during the incident that he was discharging his duties as mandated in busy of airspace and was routinely passing TI to ac operating under a BS, under the duty of care principle. The turn by the C172, which was not prompted by the controller, reduced the horizontal distance between the ac. At that point the Tutor had changed squawk to 7000 and in the process of changing frequency to Cranwell APP.

Although the constant calling of TI to BS ac can cause confusion, there remains a duty of care to which controller must apply their judgement (the regulation is far from clear in this respect).

UKAB Note (1): The recording of the Claxby radar shows the incident. In the lead up to the CPA the Tutor changes squawk to 7000 at 1048:32 in the climb through FL014 to level briefly at FL016 at 1048:54 while tracking 100° towards the C172. The C172 is squawking 3603 but does not display any Mode C data as it tracks initially 195° before turning right onto 210°. It passes from left to right, on a line of constant bearing, 0.2nm (185m) ahead of and above, the Tutor which is still at FL016. Assuming that the C172 was at 2000ft amsl, as the pilot reported, the vertical separation would have been 350ft.

HQ AIR (TRG) comments that the student saw the Cessna later than ideal but took positive action to avoid it in height. The limitations of fixed cockpit structures on the lookout scan are well understood and require positive head movements to clear the whole horizon; however, this is known about and taught. This incident serves as a timely reminder of the problem. It is disappointing that the Cessna, visual from such a long distance, did not take any action to alter course other than to turn further into confliction. Had the Tutor not manoeuvred at a late stage, the vertical separation would have been considerably less. In effect, the Tutor, with the right of way, was forced to take avoiding action as the Cessna, despite being content that there was no collision risk, crossed sufficiently close in front of the Tutor to cause concern. The resultant CPA was around 500ft.

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 recordings, reports from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

The Board noted that both ac were operating legitimately under VFR in Class G airspace under the 'see and avoid' principle and both were in receipt of BS where ATC is not obligated to provide TI. In the event however, Waddington Zone, having the capacity to do so, did provide TI to the C172 and this drew the pilot's attention to the Tutor as it climbed up from its PFL. Members observed that, although under no obligation to do so, it would have assisted the C172 pilot's visual acquisition of the Tutor if the controller had added that it was climbing. It was not clear to Members whether the C172 pilot had, as implied in his report, seen the Tutor before the TI was passed or whether his acquisition was a result of the TI; in any case the pilot considered there to be no risk of collision. The Tutor

student and subsequently the instructor were, on the other hand, concerned by the proximity of the C172 as it flew almost directly above them. Members also noted that under the Rules of the Air the Tutor had right of way and, although adequate vertical separation may have existed, a turn by the C172 pilot would have indicated to the Tutor pilots that the former had seen them and was relatively unconcerned.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C172 flew close enough to cause the Tutor pilots concern.

Risk: C.