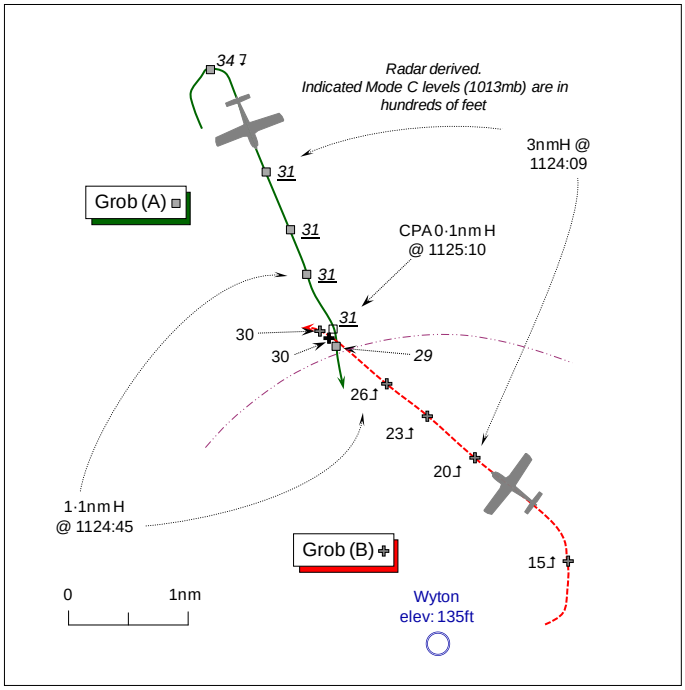
AIRPROX REPORT No 2011039

Date/Time: 4 May 1125Z

Position: 5224N 00008W (347° Wyton A/D 2·7nm - elev 135ft)

Airspace:	FIR/ATZ	(*Class:* G)
	Reporting Ac	*Reported Ac*
Type:	Grob Tutor (A)	Grob Tutor (B)
Operator:	HQ Air (Trg)	HQ Air (Trg)
Alt/FL:	↓3000ft QFE (1018mb)	↑3000ft RPS
Weather:	VMC	VMC
Visibility:	30km	>10km
Reported Separation:	Nil V/30-50m	NR
Recorded Separation:	100ft V/0·1nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PILOT OF GROB TUTOR (A) reports he was the PIC of a VFR instructional sortie flying the ac from the LH seat, whilst on recovery to Wyton in perfect weather conditions with excellent visibility and no significant cloud. He was in receipt of a BS from Wyton TOWER on 119·975Mhz and a descent and overhead join had been approved.

About 3m N of the aerodrome, the recovery checks had been completed and he had demonstrated a lookout turn before initiating a descent. While teaching the cruise descent to 3000ft QFE (1018mb) heading S at 100kt, with a view to manoeuvring for the overhead join, another Tutor ac [the callsign of Tutor (B) was given] appeared from behind the left canopy bar in their 10-11 o'clock position at a similar height and in a shallow climb from L to R at an estimated range of no more than 100m. He took aggressive avoiding action by executing a descending turn to the L, passing below and 30-50m behind the other Tutor ac. The pilot of the other Tutor ac appeared to take no avoiding action and he assessed the Risk as 'very high'. He spoke with the PIC of Tutor (B) who, before his evasive manoeuvre, had not seen their ac.

A squawk of A7000 was selected with Mode C; Elementary Mode S is fitted, TCAS is not. The ac is predominantly white with a blue fin flash; the HISL and nav lights were on.

THE PILOT OF GROB TUTOR (B) reports he was airborne on a VFR training sortie from Wyton but was in receipt of a TS from Cottesmore ATC on 130·2MHz. Heading 330° in the climb at 80kt, he was informed by Cottesmore ATC of another ac 2nm to the N. Climbing through 3000ft, he thought 4nm N of Wyton but actually at a range of 2·7nm from the A/D, he dropped the right wing to have a good lookout and thought he saw something flash by underneath to starboard, but he could not be sure. He assessed the Risk as 'medium'.

A squawk of A7000 was selected with Mode C; elementary Mode S is fitted, TCAS is not. Although not specified the ac was presumed to have the same colour scheme as Tutor (A) – predominantly white with a blue fin flash. Wing-tip strobes lights, the nose taxi light and nav lights were all on.

THE WYTON AERODROME CONTROLLER (TOWER) reports that the pilot of Tutor (A) reported an Airprox at a position 3nm N of the aerodrome at 3000ft QFE (1018mb). The reported ac was also a Grob Tutor and believed to be another Wyton based ac. The runway-in-use was RW08, the prevailing visibility 30km and the A/D Colour State BLUE.

UKAB Note (1). The UK AIP at ENR-2-2-2-5, notifies the Wyton ATZ as a circle radius 2.5nm centred on RW08/26 extending from the surface to 2000ft above the aerodrome elevation of 135ft and active in Summer from Sunrise to Sunset. Wyton does not have a MATZ.

ATSI reports that the Airprox occurred at 1125:10, in Class G airspace, 2.7nm to the NNW of Wyton A/D and just outside of the Wyton ATZ.

Grob Tutor (A) was operating VFR on a training exercise and returning to Wyton for recovery, in receipt of a BS from Wyton TOWER. Grob Tutor (B) had departed VFR from Wyton on a training exercise, in receipt of a TS from Cottesmore ZONE.

Wyton TOWER and APPROACH (APP) were operating as separate positions without the aid of surveillance equipment.

The Wyton 1050 and 1150 UTC METAR:

> 1050Z 11009KT 9999 FEW040 SCT250 13/02 Q1023 BLU=
> 1150Z 14009KT 9999 FEW045 SCT250 14/02 Q1022=

Tutor (B) departed from Wyton's RW08 at 1122:15. The pilot of Tutor (B) reported switching to Wyton APP at 1122:57 and at 1123:50, reported calling Cottesmore.

Five seconds later at 1123:55, the pilot of Tutor (A) contacted Wyton APP for a visual recovery in receipt of information 'Echo' and was transferred to Wyton TOWER. At 1124:20 the pilot of Tutor (A) contacted Wyton TOWER and requested an overhead join. TOWER instructed Tutor (A) to join for RW08, QFE 1018mb, circuit clear. This was correctly acknowledged by the pilot of Tutor (A), in receipt of a BS.

At 1125:12 Tutor (A) reported the Airprox 2nm to the N of Wyton A/D, with another Tutor.

The written report from the pilot of Tutor (B), indicated that whilst climbing on a northwesterly track and in receipt of a TS, Cottesmore ATC informed him of another aircraft 2nm to the N.

The Wyton TOWER controller had advised Tutor (A) that the circuit was clear. The situational awareness of the pilot of Tutor (A) could have been aided if the Wyton TOWER or Wyton APP controllers had passed TI in general terms regarding the recent departure of Tutor (B). However, it is likely that the positions and routeings of both ac were unknown to Wyton and the pilot of Tutor (B) had quickly switched from TOWER to Wyton APP and then to Cottesmore ZONE.

At the time of the Airprox Tutor (A) was in receipt of a BS from Wyton TOWER operating to the N of the Wyton ATZ. The Manual of Air Traffic Services, Part 1, Section 1, Chapter 11, Page 4, paragraph 3.5.1, states:

> 'Pilots should not expect any form of traffic information from a controller, as there is no such obligation placed on the controller under a Basic Service outside an Aerodrome Traffic Zone (ATZ), and the pilot remains responsible for collision avoidance at all times. However, on initial contact the controller may provide traffic information in general terms to assist with the pilot's situational awareness. This will not normally be updated by the controller unless the situation has changed markedly, or the pilot requests an update. A controller with access to surveillance derived information shall avoid the routine provision of traffic information on specific aircraft, and a pilot who considers that he requires such a regular flow of specific traffic information

shall request a Traffic Service. However, if a controller considers that a definite risk of collision exists, a warning may be issued to the pilot.'

HQ 1GP BM SM reports that Tutor (B) was outbound from Wyton VFR and was calling for a TS from Cottesmore ZONE, when Tutor (A) was positioning for an overhead join at Wyton, in receipt of a BS from Wyton.

The Airprox was not declared to Cottesmore at the time and with the length of time that elapsed between the submission of Tutor (B)'s report, the Cottesmore ATC personnel involved could not recall the incident. Consequently, this investigation is based upon the reports of the aircrew involved, the Cottesmore RT tape transcript and the retrospective recollection of Cottesmore ZONE.

Although Cottesmore airfield has closed, the LARS/ZONE task and Wittering APP tasks remain at Cottesmore ATC. Both control positions are manned throughout their notified operating hours and where it is identified that ZONE is busy, Wyton Tutor crews are pre-briefed to contact APP on UHF. In this case, the pilot of Tutor (B) called Zone on VHF at 1124:14 but was instructed to standby. At 1125:02, ZONE passed accurate TI to the pilot of Tutor (B) stating, "*traffic believed to be you has traffic 12 o'clock, half a mile, similar height*" which was acknowledged by Tutor (B).

Between 1124:14 and 1125:02, ZONE was called by 2 other flights, both being instructed to standby. Although the individual controllers involved in the occurrence were unable to recall any detail, subsequent analysis of the audio tapes by the unit identified that the control position was in the process of being handed over. The handover was completed at some point after 1129:23, with the new controller's voice evident at 1130:23. However, the off-going controller felt that the handover was commenced at around 11:24, almost co-incident with the pilot of Tutor (B)'s initial call, but they could not recall this with any clarity. Moreover, as there is no 'live-mic' recording, no details of the handover were recorded.

MAA RA 3003(2), through MMATM Ch 3 Para 4, states that:

'A change of controller should not be attempted until a suitable point is reached during the recovery of aircraft under control.'

The pilot of Tutor (A) reports that Tutor (B) "*appeared from behind the left canopy bar in our 10-11 o'clock position*." The radar replay depicts the Tutors on a constant relative bearing, in the position described by Tutor (A), until the range had decreased to 0·7nm at 1124:54. Shortly after this both Tutors turn, maintaining the confliction, with the CPA of 0·1nm occurring at 1125:10.

Based upon the tape transcript, there appears to be a burst of a higher taskload for ZONE at the point that the pilot of Tutor (B) calls at 1124:14. Moreover, given ZONE's response to Tutor (B) and the other 2 ac to, "*standby*", it is reasonable to argue that they were engaged in another task that is not evident on the tapes. This would support ZONE's recollection that they had just commenced the handover of the control position.

It is clear from the controller's subsequent actions that they correctly maintained control of the position in accordance with the regulation. Moreover, despite having not yet been able to identify Tutor (B) as it departed Wyton, ZONE passed TI to the pilot of Tutor (B) about Tutor (A) in as timely a manner as could be expected given the RT loading on the frequency.

Based upon Tutor (A) pilot's report, their late sighting of Tutor (B) appears to be as a result of the ac's constant relative bearing and position behind Tutor (A)'s canopy arch. It is likely that a similar explanation underlies the effective non-sighting of Tutor (A) by the pilot of Tutor (B). The ongoing embodiment of TAS to the Tutor fleet will serve as an effective additional safety barrier to similar recurrences.

HQ AIR (TRG) comments that the application of deconfliction plans at Wyton is under review by HQ 22 (Trg) Gp. Notwithstanding this, the pilot of Tutor (B) received accurate TI on Tutor (A), but at very

close range, without any indication of whether it was on a converging heading. Whilst TAS may make such incidents less likely in the future, units still need to ensure they apply robust deconfliction systems, particularly around the airfield. With the known hazard of blind spots in the Tutor, an active lookout scan is required in order to cover these areas.

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, a report from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

Members noted that the pilot of Tutor (B) had promptly left the Wyton APP frequency, called Cottesmore ZONE as soon as he passed the upper limit of the Wyton ATZ and that the crew of Tutor (A) had called 5sec after Tutor (B) had switched to ZONE. It was suggested that both pilots, who were equally responsible for avoiding each other's ac, might have potentially gained better SA on other aerodrome traffic from the pilots RT calls to APP, or possibly from a warning by the controller about the inbound ac, but such information might well have been incomplete without the benefit of radar data. Notwithstanding the completion of the Wyton Tutor fleet TAS embodiment programme, the HQ Air Ops Member stated that the review of the Unit's deconfliction plans was still in progress. He also emphasised that the pilot of Tutor (B) might not necessarily have received any additional warning if he had stayed with Wyton APP whilst in the immediate vicinity of the ATZ. Nevertheless, as soon as the controller was able to do so, Tutor (B) had been given TI by ZONE and Members commended the Cottesmore controller for this prompt call. Unfortunately, Tutor (B) pilot was unable to make use of this TI before he caught a fleeting glimpse of Tutor (A) as it flashed by underneath to starboard. Therefore, in the Board's view the first part of the Cause was effectively a non-sighting by the pilot of Tutor (B).

Fortunately, the crew in Tutor (A) had spotted the other ac just in time, as it appeared from behind the canopy bar in their 10-11 o'clock but only 100m away in a shallow climb, and took aggressive avoiding action, descending and turning to the L to pass below and 30-50m behind Tutor (B). The radar recording reflected that Tutor (B) was beneath Tutor (A)'s nose and closing on a steady relative bearing immediately before the Airprox occurred. All this led Members to conclude that a late sighting by the crew of Tutor (A) was the other part of the Cause.

The descending L turn had enabled the pilot of Tutor (A) to manoeuvre away he reports, but the radar recording reflected that horizontal separation was no more than 0·1nm – 185m – and from his account was a lot less at an estimated 30-50m. A test pilot Member commented that at these distances this class of aeroplane does not have a rate of roll high enough to facilitate swift avoiding action by turning away. Such aeroplanes take time to respond to a pilot's control inputs and change their flight path to a significant extent; another pilot Member added that an instinctive bunt might be all that could be achieved at very close quarters. Although Tutor (A) had descended 200ft in one sweep of the radar (4sec data update rate), only 100ft of vertical separation had resulted against Tutor (B) as it levelled: one CAT pilot Member considered this was sufficient to avert an actual Risk of collision, however, this was a solitary view. The overwhelming majority of the Members perceived that, although the pilot of Tutor (A) had managed to react in the short time available at these close quarters, it was barely effective and the Board concluded that an actual Risk of collision had existed in the circumstances reported here.

PART C: ASSESSMENT OF CAUSE AND RISK

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

Degree of Risk: A.