AIRPROX REPORT No 2014082

Date/Time: 9 Jun 2014 0805Z

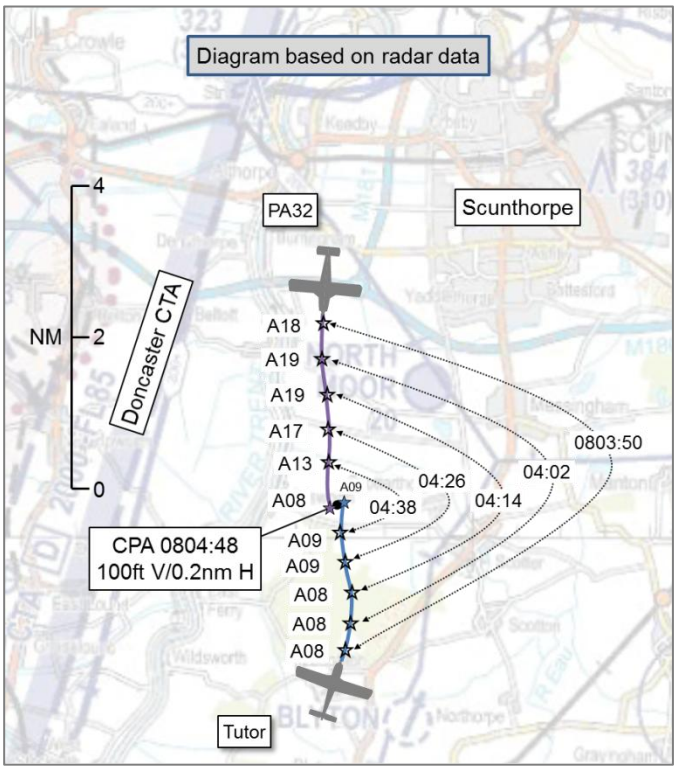
Position: 5330N 00043W (10.5nm ENE Doncaster/Sheffield Airport)

Airspace: London FIR (*Class*: G)

	Aircraft 1	*Aircraft 2*
Type:	Tutor T1	PA32
Operator:	HQ Air (Trg)	Civ Pte
Alt/FL:	800ft RPS	NK
Conditions:	VMC	VMC
Visibility:	10km	NK

Reported Separation: <100ft V/<500m H NK V/1nm H

Recorded Separation: 100ft V/0.2nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TUTOR PILOT reports operating a VFR training detail, in VMC, in receipt of a Basic Service from Humberside (HUY) Approach. Wing-tip HISLs and landing lights were illuminated; SSR Modes C and S were selected; and the aircraft was TAS equipped. During a medium- to low-level navigation sortie, the TAS alerted him to conflicting traffic dead-ahead, level and less than 1nm away. His student picked up the aircraft visually in the 1130 position, slightly lower, within 1nm. A wing-waggle, followed by a right turn, was initiated to indicate that they could see the aircraft and to clear the conflict; however the aircraft appeared to be turning left into their path. The other aircraft then turned right and passed clear in a manner that indicated that the pilot had seen the Tutor. No TAS indication was observed prior to the audio warning with a TA alert.

He assessed the risk of collision as 'Medium'.

THE PA32 PILOT reports he was on a solo flight under VFR in VMC in receipt of a Traffic Service from Doncaster/Sheffield airport (DSA). His aircraft was coloured white/blue; strobes, HISLs and navigation lights were illuminated; SSR Mode C was selected. In his opinion this was not an Airprox. He was in visual contact with the Grob aircraft at all times. He manoeuvred to the side and above to enable him to maintain visual contact.

He assessed the risk of collision as 'None'.

THE HUMBERSIDE APPROACH CONTROLLER reports that the Tutor was on a low-level navigation sortie routing north towards Scunthorpe then east towards Caistor and Covenham Reservoir, in receipt of a Basic Service. He had for some time been monitoring an aircraft on a reciprocal track, squawking 6160 (a DSA allocated squawk) indicating an altitude of 1900ft. He observed the aircraft within 2nm of each other still maintaining over 1000ft vertical separation and, because he did not consider that there was a risk of collision, he did not pass Traffic Information. He turned his attention to other aircraft on frequency. Shortly afterwards, he returned his attention to the Tutor, noticing that the squawks of the two aircraft had 'garbled' and that the other aircraft was indicating 1200ft. When established on an easterly track, south of Scunthorpe, the pilot of the Tutor informed him of his intention to submit an Airprox report against an aircraft that he had encountered

just prior to turning east. He subsequently informed DSA Radar of the Tutor pilot's intention of submitting an Airprox report, and he obtained the details of the other aircraft [the subject PA32].

Factual Background

The Humberside weather was recorded as follows:

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METAR EGNJ 090750Z 04005KT 9999 FEW045 18/16 Q1018=
METAR EGNJ 090820Z 07005KT 9999 FEW030 18/16 Q1018=
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CAP 774[1] (UK Flight Information Services) states:

'A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.

Basic Service relies on the pilot avoiding other traffic, unaided by controllers/ FISOs. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.

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, and the pilot remains responsible for collision avoidance at all times. However, if a controller considers that a definite risk of collision exists, a warning may be issued to the pilot.'

CAP 774[2] 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 controller shall pass traffic information on relevant traffic, and shall update the traffic information if it continues to constitute a definite hazard, or if requested by the pilot.'

Analysis and Investigation

CAA ATSI

The Airprox occurred at 0804:47, 10.5nm to the east-northeast of DSA within Class G uncontrolled airspace, between a Tutor and a PA32. The Tutor pilot was operating under VFR on a navigational sortie and was in receipt of a Basic Service from HUY Radar. The PA32 pilot was operating under VFR in receipt of a Traffic Service from DSA Radar. CAA ATSI had access to the RTF and area radar recordings together with a written report from both pilots, the HUY Radar controller and the HUY ATSU investigation report.

The PA32 pilot contacted DSA Radar at 0756:12 and was allocated squawk 6161. The PA32 pilot reported on a VFR flight looking to transit the edge of the DSA Zone. Radar recordings show that the PA32 was 23nm north-northeast of DSA at FL18. The controller agreed a Traffic Service instructing the pilot to be responsible for his own terrain clearance until passing 1900ft. The controller passed the QNH of 1018hPa and the PA32 pilot replied that he intended to maintain 2000ft.

At 0801:30, the Tutor pilot contacted HUY Radar and was instructed to squawk 4271. The Tutor was 17nm southwest of HUY and the pilot requested a Basic Service reporting south of

[1] Chapter 2
[2] Chapter 3

Scunthorpe routeing Scunthorpe, Caistor, and Covenham on a navigation exercise at 800ft on pressure setting 1012hPa. The HUY controller identified the Tutor and agreed a Basic Service passing the Barnsley RPS as 1012hPa, which was acknowledged by the Tutor pilot. The distance between the two aircraft was 14.6nm.

At 0802:58, the DSA controller passed Traffic Information *"*[PA32 C/S] *traffic in your twelve o'clock range ten miles opposite direction indicating altitude nine hundred feet and tracking northbound"*. The PA32 pilot acknowledged *"er we'll keep a good lookout we're gonna be descending into er zero nine at er Sturgate in a moment".* (Figure 1.)

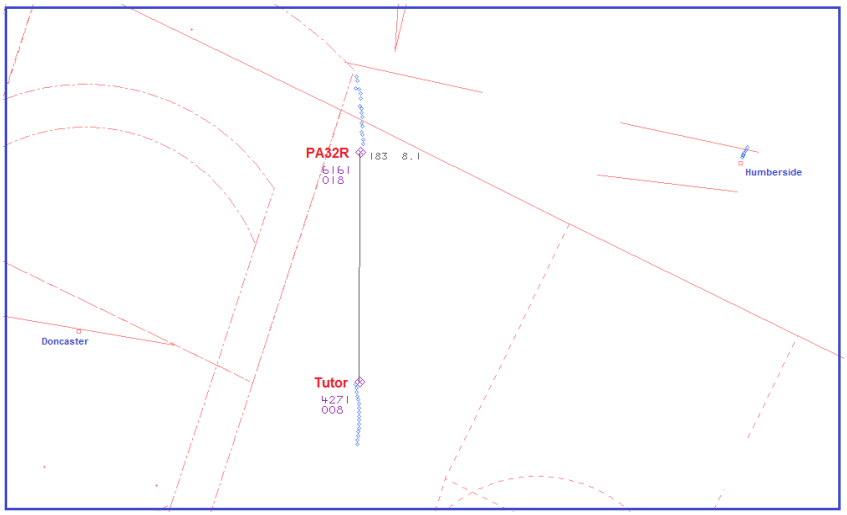

Figure 1 – Swanwick MRT at 0802:58

The DSA controller was aware that the PA32 pilot intended to descend and at 0804:10 he updated the Traffic Information "[PA32 C/S] *previously mentioned traffic in your twelve o'clock range three miles tracking er northbound and indicating altitude one thousand feet and climbing"*. The PA32 pilot replied *"Yeah we have him visual er* [PA32 C/S]". (Figure 2.)

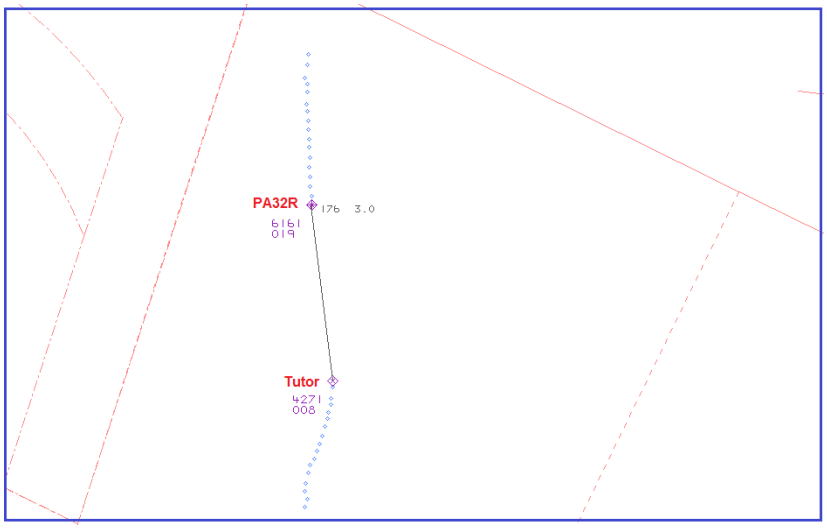

Figure 2 – Swanwick MRT at 0804:10

The DSA ATSU, in discussion with HUY, reported that the DSA controller had provided Traffic Information early as the PA32 pilot was intending to commence descent to approach his destination and further Traffic Information was passed resulting in the PA32 pilot reporting visual. The DSA controller did not believe that it was necessary to pass information to HUY. The Letter of Agreement (LoA) between the units states that: *'Traffic Information should be passed by each unit to the other on relevant aircraft where it would be beneficial to the recipient'.*

The PA32 pilot commenced a descent and at 0804:40 the lateral distance between the two aircraft was 1nm and the vertical distance was 400ft. (Figure 3.)

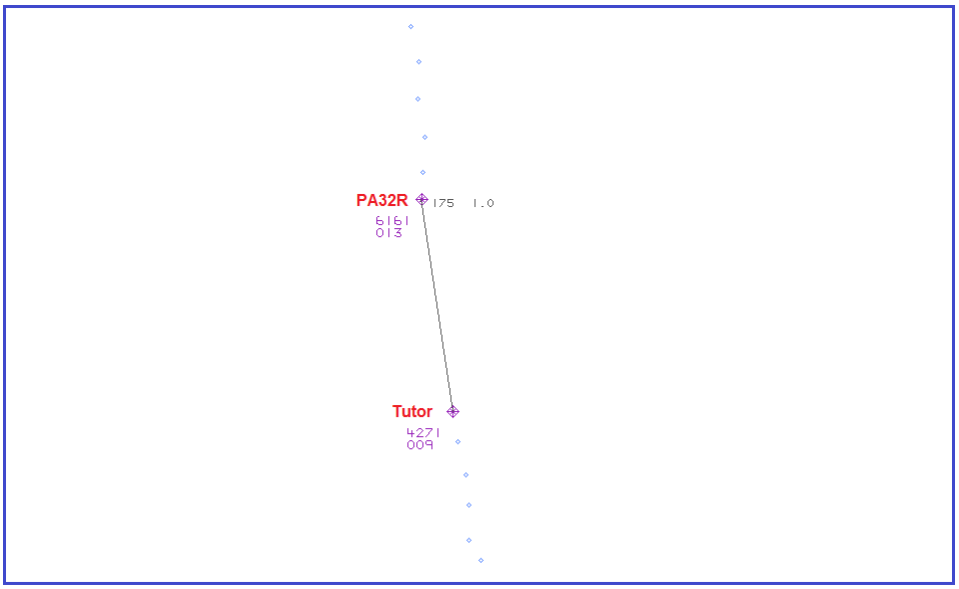

Figure 3 – Swanwick MRT at 0804:40

The CPA occurred at 0804:46, between radar updates, when it was calculated that the two aircraft passed abeam at a range of 0.2nm at a similar level. The next radar update at 0804:50 showed that they had passed abeam. (Figure 4.)

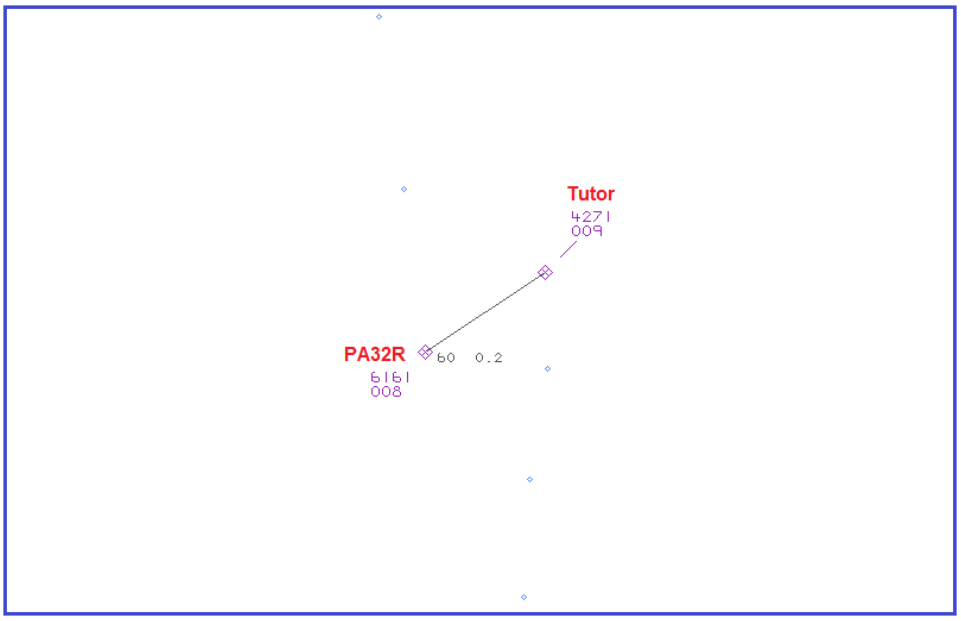

Figure 4 – Swanwick MRT at 0804:50

At 0808:41, the Tutor pilot, when asked to pass his message, reported, *"Roger just filing with you er we had an Airprox just before our turn point near Scunthorpe timed at 09:05* [local] *we were about eight hundred feet on the QNH er an aircraft within one mile head on to us we both avoided".*

The HUY controller initially transmitted descent instructions to an inbound aircraft before responding, *"*[Tutor C/S] *roger will you be filing an Airprox report".* The Tutor pilot replied, *"Yeh we will file when we get back to base etc but just for your information",* which was acknowledged by the controller. At 0812:25, the HUY controller advised the Tutor pilot *"Reference your Airprox just*

spoken to Doncaster who were working the aircraft er they said that the aircraft was visual with you". The Tutor pilot responded *"Roger it appeared so we both er took avoiding action"*.

The HUY Radar controllers workload was assessed as medium and the ATSU reported that the HUY Radar controller had also been listening to the Tower frequency at the time.

The ATSU recommended a review of the LoA between the two units and a controller bulletin regarding 'the listening in another controller's frequency to the detriment of their own tasking'.

HQ Air Command

Whilst the Tutor crew's use of TAS and lookout proved to be effective barriers in this incident, the decision by the PA32 captain to pass so close abeam raised concern. The subsequent actions from both crews were in compliance with the Rules of the Air.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision[3]. If the geometry is considered as 'head-on' then both pilots were required to alter course to the right[4].

Summary

The Airprox occurred when the PA32 and Tutor came into close proximity whilst operating under VFR in Class G airspace where the pilots were ultimately responsible for their own collision avoidance. The PA32 pilot was in receipt of a Traffic Service from DSA Radar and, prior to descending, had been passed appropriate and timely Traffic Information resulting in the PA32 pilot reporting that he was visual with the Tutor at all times. The Tutor pilot, operating below 1000ft, was in receipt of a Basic Service from HUY Radar. The HUY controller was not aware that the PA32 pilot intended to descend into potential conflict, and therefore did not provide a warning to the Tutor pilot. Both aircraft had been identified by their respective radar units but neither of the two controllers had considered it appropriate (in accordance with the LoA) to request or pass pertinent traffic information to each other. Both pilots turned right in accordance with the Rules of the Air.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, one of the controllers concerned, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board looked first at the actions of the ATC agencies involved and noted that the pilot of the PA32 was being provided with a Traffic Service by the Doncaster Radar controller. It was agreed that the controller had issued pertinent and timely Traffic Information to the pilot to assist in him sighting the Tutor at a range of at least 3nm. As for the Tutor, its pilot was in receipt of a Basic Service from the Humberside Approach Radar controller who had observed the PA32 approaching head-on to the Tutor, vertically separated by approximately 1000ft. Consequently, because he believed there was no confliction he turned his attention to other traffic. The Board noted that, under the terms of a Basic Service, the controller did not have to monitor the aircraft's track or pass Traffic Information unless he considered that there was a definite risk of collision, which there was not at that time because he was not aware that the PA32 pilot would shortly be descending towards his destination. The Board were aware of the Letter of Agreement (LoA) between the two ATSUs (which stated that Traffic Information should be passed on relevant aircraft where it would be beneficial to the recipient) and they opined that this was a pertinent issue; if the Doncaster controller had informed the Humberside controller that the PA32 pilot would be descending shortly, it would have allowed him to pass relevant Traffic Information to the Tutor pilot who might then have been able to prioritise his lookout accordingly.

[3] Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions) and as reflected in Military Flying Regulations.
[4] Ibid., Rule 10 (Approaching head-on).

The Board then turned its attention to the actions of the PA32 pilot after he had sighted the Tutor. Although the PA32 pilot seemed content with his own separation, the Board considered that it would have been more appropriate for him to offset his track at an earlier stage rather than continue tracking towards the Tutor, especially once he commenced descent towards its reported altitude. His action in maintaining track towards an aircraft when he did not know whether it had him visual was considered to be the cause of the Airprox which had resulted in the PA32 pilot flying close enough to cause the Tutor pilot concern, despite receiving Traffic Information and attaining visual contact.

The Board noted that the Tutor pilot had only became aware of the presence of the PA32 when his TAS had activated, when it was less than 1nm away. This showed the significant benefit of an aircraft being fitted with TAS because it had immediately assisted his student in sighting the PA32, which by now had just descended through the Tutor's altitude. A wing-waggle and a right turn were carried out by the Tutor pilot, although a Military Pilot member commented that because the two aircraft had been in danger of a collision, the Tutor pilot should have gone straight into an avoiding action turn first instead of wing-waggling. Nevertheless, given that both pilots had gained sight of each other's aircraft (albeit at a late stage for the Tutor pilot), and that they had both had time to take appropriate avoiding action turns, the Board considered that, although the aircraft had come into unnecessary proximity at 0.2nm lateral separation, there had been no risk of a collision; consequently, it was considered that the Airprox should be categorised as Risk C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA32 pilot flew close enough to cause the Tutor pilot concern, despite receiving Traffic Information and attaining visual contact.

Degree of Risk: C.

ERC Score[5]: 2.

[5] Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.