

head to Princes Risborough to regain his bearings. He realised he had 'gone too far East' by this time and, in turning North, he spotted an airfield. He started to descend and then realised it was RAF Halton. He turned and climbed away, heading for Princes Risborough, then 'followed the valley south to the Golden Ball' [a visually significant building to the north of WAP], re-established contact with WAP, and joined downwind to land on RW06 as originally intended. On arrival at WAP he was advised that he had infringed 'Halton's airspace'. He did not see the Eurostar.

The pilot stated that since this incident he had had 'two sessions with an instructor' with numerous landings on RW06 at WAP to re-establish his positioning for base leg joins. He had purchased a commercial GPS aviation chart display and had also decided that, should he ever need assistance from D&D again, he would set the transponder to 7700 'so they could get a Radar fix'.

Factual Background

The weather at Luton was recorded as follows:

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METAR EGGW 101420Z 02014KT 350V060 9999 FEW024 SCT042 20/14 Q1026  
METAR EGGW 101450Z 01014KT 9999 SCT022 20/13 Q1026
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Analysis and Investigation

CAA ATSI

The incident occurred at about 1434:20, within the Class G airspace of the Halton ATZ, between a Cosmik EV-97 Eurostar microlight and a Piper PA-28-161 Cherokee Warrior II. The Halton ATZ comprises a circle of radius 2nm, centred at 514734N 0004416W, on RW02/20, and extending to a height of 2000ft above aerodrome level (elevation 370ft).

The EV97 pilot was returning to Halton RW07 after a local VFR flight and was in communication with Halton Radio but was not in receipt of an Air Traffic Service. The PA28 pilot was operating on a VFR flight to Wycombe Air Park and was in communication with London D&D.

CAA had access to D&D RTF recording and area radar recording. The RTF for Wycombe Air Park was not available due to a delay in establishing the time and circumstances of the event. Both reports were received by CAA ATSI more than 30 days after the occurrence. The EV97 pilot's report indicated that the incident occurred at 1534 on 10 July 2013 and the PA28 pilot's report indicated 1543 on 10 August 2013. Radar analysis, combined with RTF from the D&D cell established that the incident actually occurred on 10 July 2013 at about 1434:20.

At 1425:00, radar showed the EV97 was 4.3nm southwest of Halton, squawking 7000 with Mode C indicating an altitude of 1900ft. A primary only contact was shown, tracking north, in the EV97 aircraft's half-past-four at a range of 1.6nm. The EV97 tracked to route to the west of Halton before joining the circuit. The primary contact turned right and tracked southeast.

At 1429:00, the PA28 pilot contacted D&D and reported over Wycombe, confirming a practice Pan and requesting directions to Wycombe Air Park. The pilot reported lost over the Chilterns. The D&D support controller indicated that the PA28's position was 6nm northeast of High Wycombe and that Wycombe Air Park was on a bearing of 205° at 6nm.

Radar recording showed an intermittent primary contact 6.5nm north-northeast of Wycombe Air Park and 4.4nm south of Halton, tracking west. This primary contact was most likely the PA28.

At 1430:40, D&D advised the PA28 pilot to contact en-route if no further assistance was required. The PA28 pilot confirmed that he still required assistance as the airfield was not in sight. At 1431:00, D&D asked the PA28 pilot to report when he was visual, which the PA28 pilot acknowledged. Radar showed the intermittent primary contact 4.5nm south of Halton, manoeuvring first onto a northerly, then westerly and then north-easterly track.

Meanwhile the EV97 pilot had joined the visual circuit at Halton. At 1433:13, the primary contact entered the Halton ATZ on a northerly track and the EV97 commenced a turn onto final approach for RW07, indicating 1200ft.

At 1433:31 the EV97 was at 1.2nm final, indicating 1000ft, and the primary contact was 1.4nm south-southwest of Halton, as shown in Figure 1 below.

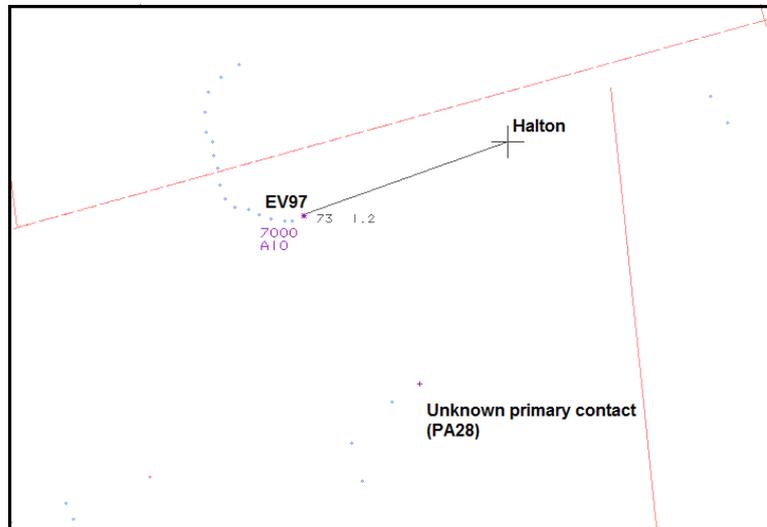


Figure 1: Swanwick MRT at 1433:31

The PA28 pilot's written report and subsequent conversation with Halton indicated that he thought he had gone too far east and so turned north. In doing so he spotted an airfield which he thought was Wycombe and he started to descend, contacting Wycombe for an approach. At 1433:43, the primary contact is shown to have made a left turn onto north, as shown in Figure 2 below.

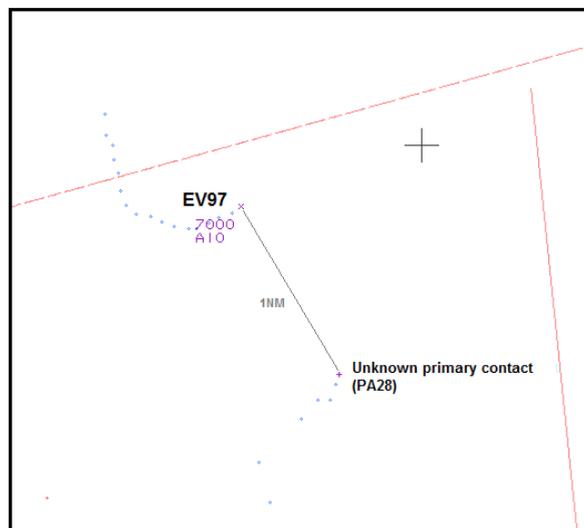


Figure 2: Swanwick MRT at 1433:43

Shortly afterwards, at 1433:48, the primary contact faded from radar. The EV97 pilot continued the approach to RW07 and at 1434:08 was 0.5nm from touchdown at altitude 600ft (height 230ft) before also fading from radar.

At 1434:23, D&D called the PA28 pilot, requesting current height, without a response. At 1435:02, D&D again called to check that the PA28 pilot was still on frequency without receiving a response. The PA28 had contacted Wycombe Air Park by this time.

The PA28 pilot, unsure of his position was very likely disorientated. Wycombe suggested that he contact D&D for assistance. D&D suggested that he was 6nm northeast of Wycombe Air Park, however at this point the PA28 pilot sighted an airfield and, thinking it was Wycombe Air Park, he changed to their frequency without advising D&D. The airfield was Halton and the PA28 pilot routed through the Halton ATZ and active circuit whilst in communication with Wycombe and into conflict with the EV97 microlight which was on short final for RW07.

Comments

THE HALTON STATION FLIGHT SAFETY OFFICER (SFSO) reports that it is highly unusual to have a powered aircraft, apart from a tug, operating in the airspace that the PA28 flew in from. The SFSO contacted a member of the flying club that owned the PA28, who stated that the pilot had already caused some concern with D&D and that he would ask the pilot to call the SFSO. The pilot called and offered his apologies. He stated that he had become temporarily unaware of his position in the vicinity of Chinnor, and that he had called D&D and got a steer from them towards Wycombe Air Park. He saw what he thought was Wycombe Air Park (which was in fact RAF Halton) and proceeded to call and make an approach on Wycombe's frequency. It was only when he was very close that he realised it was RAF Halton and broke off his approach. He stated that he never saw the Eurostar. Due to the fact the PA28 pilot reportedly never saw the Eurostar, the SFSO classed the severity as 'High'.

HQ Air Command

Given what seems to be a genuine case of a lost pilot mis-identifying Halton as his destination, there is little to add, other than to commend the Eurostar pilot for his lookout and the A/G controller for his handling of the incursion. Even the most disciplined circuit faces a hazard from such lost traffic and this incident underlines the need for effective look-out at all stages of flight, even within the 'protected' environment of an ATZ.

Summary

A Eurostar and a PA28 flew into conflict on short final to RW07 at RAF Halton at about 1434 on 10th July 2013. The Eurostar pilot was operating from his home field, in communication with Halton Radio. The PA28 pilot was temporarily uncertain of his position and thought he was approaching Wycombe Air Park.

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 photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board first considered the actions of the EV-97 pilot and agreed that he had been operating normally and correctly within the Halton ATZ. Members reflected that an ATZ can only provide protection if other airspace users are aware of its presence, and that the need to lookout and 'see-and-avoid' should never be relaxed. In the event the EV-97 pilot was concentrating on his approach and, in the reported configuration and energy state, had few options for avoiding action once he had spotted the PA28 at such a late stage. The Board commended his decision to continue and land as that presenting the least risk.

Turning to the PA28 pilot, he had sensibly contacted D&D for assistance after turning east from his first abortive attempt at finding WAP. That being said, the Board were concerned that his apparent trepidation regarding noise sensitive areas to the south of WAP had contributed to a heightened state of anxiety and consequent confused decision making. Members opined that a better course of action might have been to return to a known geographical point, in this case perhaps the Stokenchurch mast, and then to attempt a further rejoin. The Board also agreed that the application of basic navigation techniques, such as heading and time from a known point, would have greatly assisted

him in his task. The by now understandably flustered PA28 pilot was provided with a bearing and range to WAP by D&D but appeared to be confused by the information that D&D passed to him. Of note was his perception that the D&D operator had stated that he was not a controller, and that he couldn't give the PA28 pilot a heading to WAP. A recording of the conversation showed that the D&D 'controller' had stated that he was "... a support controller unable to provide you with a steer, taking your own terrain clearance, Wycombe indicates 205° 6nm ...". The PA28 pilot read back this information. The Board therefore concluded that the information passed to the PA28 pilot was unambiguous, but that he was unable to assimilate it successfully probably due to his anxiety at being 'lost' and the associated breakdown of his mental air picture. Having been given the bearing and range to WAP, he then saw the airfield at Halton and, despite the fact that this did not match the information he had been given, he attempted to join Halton's circuit, no doubt with relief, in the belief that it was WAP. Although it would be easy to criticise from the comfort of having significantly more experience, the Board noted that a moment's reflection would have confirmed to the PA28 pilot that the airfield he saw did not resemble his planned destination.

The cause and risk were agreed unanimously, in that the PA28 pilot entered the Halton ATZ and flew into conflict with the EV-97, and that given the reported separation at CPA, safety margins had been much reduced.

The Board were heartened by the PA28 pilot's subsequent voluntary undertaking of extra training and his adoption of a commercial GPS aviation chart display; notwithstanding, members reflected that use of such devices should always be incorporated into an effective lookout scan and maintenance of mental navigational situational awareness.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	The PA28 pilot entered the Halton ATZ in error and flew into conflict with the EV-97 on final approach (which he did not see).
<u>Degree of Risk:</u>	B.
<u>ERC Score¹:</u>	20

¹ 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.