

AIRPROX REPORT No 2013058

Date/Time: 21 Jun 2013 1740Z

Position: 53 10N 002 58W
(Hawarden Aerodrome)

Airspace: Hawarden ATZ (Class: G)

Reporting Ac Reported Ac

Type: PA38 Cirrus SR22

Operator: Civ Club Civ Trg

Alt/FL: 900ft 1500-1800ft
QFE (1007hPa) NK

Weather: VMC CLBC VMC N/R

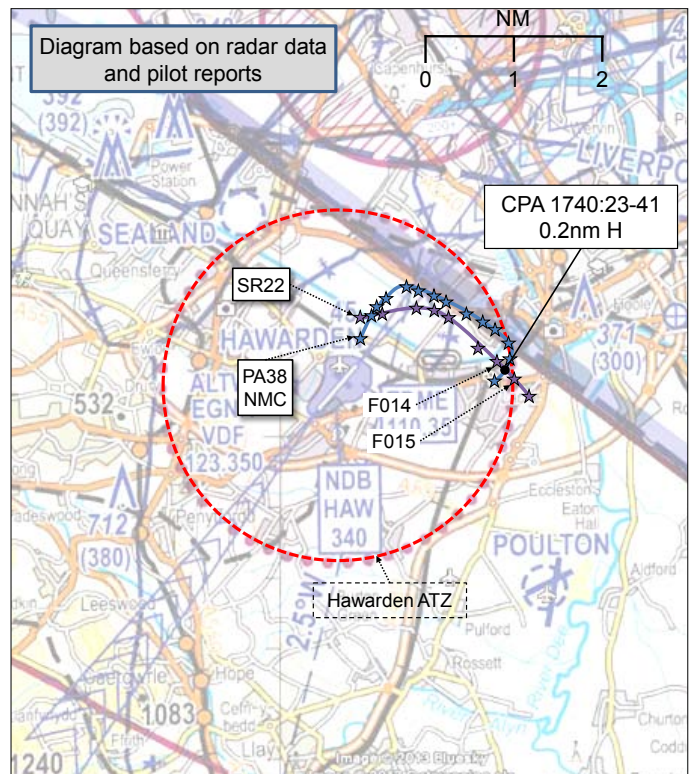
Visibility: N/R N/R

Reported Separation:

200ft V/200m H N/R V/N/R H

Recorded Separation:

N/R V/0.2nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PA38 PILOT reports flying VFR in a predominantly white aircraft, squawking Mode 3/A 7010 with no Mode C fitted. He was in contact with the Hawarden Tower controller, performing touch and go circuits on RW04RH with a student, when he heard the SR22 pilot call on the radio for taxi instructions. He perceived that the other pilot was having difficulty understanding the Tower controller. Whilst on final approach, he saw the SR22 waiting at a holding point and, following his touch-and-go, he heard the SR22 pilot being given clearance to take off whilst keeping the PA38 in sight, he thought. The PA 38 pilot was conscious that the SR22 has a significantly better performance than his aircraft, so he resolved to keep a careful look-out for it and reports that his aircraft has a rear window he was able to use. On reaching 500ft he turned on to the cross-wind leg and, as he approached the downwind turning point, he noticed that the SR22 pilot had turned cross-wind inside of his circuit; he instructed his student to level off at 900ft. Tower tried to contact the SR22 pilot 3 times to check if he could see the PA38, but the PA38 pilot did not hear a response. He then saw the SR22 pass 200ft 'directly over the top' of his aircraft. Following the Airprox, he had a telephone conversation with the SR22 pilot, who said that he had been too busy trying to see the PA38, with the assistance of his TCAS, to respond to the radio.

He assessed the risk of collision as 'High'.

THE SR22 PILOT reports that his aircraft was displaying strobe, landing and navigation lights; he had the transponder with Mode C switched on but does not recall the Mode 3/A code. He planned a VFR departure from RW04 and recalls being 'cleared for take-off, right turn, not above 1500ft'. On turning right he was 'alarmed by TAS traffic' but could not see the other aircraft. He was aware that the PA38 pilot was 'watching' his aircraft and he kept his aircraft in 'straight flight' whilst continuing to look for the other aeroplane, but he did not see it at any point. During the telephone conversation, he recalls that the PA38 pilot told him that he had maintained visual contact with the SR22 from the point it took off, and that the Airprox had occurred at around 1100ft.

THE TOWER CONTROLLER reports that the weather was good with little cloud and excellent visibility. The PA38 was flying a training sortie with multiple visual circuits to RW04RH when the SR22 pilot called for start on the 'Northern Apron'. The controller tried to establish the SR22's

endurance; it took several transmissions and the controller felt that the pilot was having 'difficulty understanding the language'. Furthermore, the controller had to read the clearance more than once before the pilot read it back correctly. When the SR22 reached Hold-Point Delta (displaced approx 400m from the threshold) the pilot requested departure. The Controller was unsure if the SR22 pilot would want to back-track to the threshold and, with the PA38 on base-leg along with the language difficulties, he decided to instruct the SR22 pilot to 'Hold' on Taxiway Delta. Taxiway Delta is angled towards the approach giving the SR22 pilot a good opportunity to see the PA38 making its approach. Once the PA38 had passed the intersection with Taxiway Delta, the Controller instructed the SR22 pilot to line-up and wait. He then passed traffic information about the PA38 to the SR22 pilot, followed by a clearance to take-off; the SR22 pilot acknowledged the clearance and, he thought, the traffic information too. The controller monitored both aircraft and, when it seemed clear that the SR22 was going to 'position nicely behind the PA38', he turned his attention to controlling tasks related to an inbound aircraft, which was around 10nm away. Tower heard the PA38 pilot transmit that he was visual with the SR22 flying closely behind his aircraft and tried to contact the SR22 pilot three times to check that he had visual contact with the PA38. After the third attempt, the SR22 pilot responded to Tower and the PA38 pilot reported that the aircraft were now clear of each other.

Factual Background

The prevailing meteorology recorded at Hawarden at the time of the Airprox was:

METAR EGNR 211720z 34002KT 9999 FEW025 SCT035 18/13 Q1009=

Hawarden circuits are notified as right hand at 1000ft QFE, elevation is 45ft¹.

Analysis and Investigation

CAA ATSI reports that it had access to reports from the PA38 and SR22 pilots, a report from the Hawarden controller, recorded area surveillance and transcription of the Hawarden Tower frequency.

RW04RH was in use; the PA38 had been conducting VFR touch-and-go circuits since 1705, in receipt of an Aerodrome Control Service from Hawarden Tower. The SR22 had just departed on a VFR flight, in receipt of an Aerodrome Control Service from Hawarden Tower.

At 1726:06 the SR22 pilot called Tower, "*request er taxi instructions departure ????? south through Welshpool (SR22 c/s) is apron November.*" Tower instructed the SR22 pilot, "*taxi holding point Delta via taxiways November Juliet Alpha and Delta for runway 04.*" The SR22 pilot replied, "*taxi and to hold point Delta via Juliet Alpha Delta.*"

The PA38 pilot reported final for touch and go at 1727:34; Tower gave the surface wind and cleared the PA38 for a touch-and-go.

At 1731:21 Tower instructed the SR22 pilot, "*if you continue along taxiway Alpha vacate correction turn left onto taxiway Delta for holding point Delta.*" The SR22 pilot replied, "*er taxiway to holding point Delta just wanted to warm up.*"

The SR22 reported at holding point Delta at 1733:56 and informed tower, "*ready for departure.*" Tower instructed the SR22:

Tower: "*hold at holding point Delta, after departure right hand turn out V F R not above altitude one thousand five hundred feet squawk 4 6 0 1*"

SR22: "*squawk er 4 6 0 1 er right er hand turn holding at Delta*"

¹ UK AIP AD 2.EGNR-9 (10 Jan 2013).

Tower: *"that is correct not above altitude one thousand five hundred feet though on departure"*

SR22: *"two thousand five hundred er after dep- the departure"*

Tower: *"it's not above one thousand five hundred feet"*

SR22: *"stay at altitude one thousand five hundred."*

The PA38 pilot reported turning for right base at 1734:49 and was instructed to report final. Tower then instructed the SR22 pilot to hold position due to an aircraft (the PA38) turning final in the circuit. This was acknowledged by the SR22 pilot.

The PA38 pilot reported final for touch and go at 1736:24 and Tower gave the surface wind and cleared him for a touch-and-go.

At 1737:03 the following exchange took place between Tower and the SR22:

Tower: *"(SR22 c/s) will you require backtrack on departure"*

SR22: *"Er (SR22 c/s) repeat please"*

Tower: *"(SR22 c/s) via Delta runway zero four backtrack as required line up and wait"*

SR22: *"Er runway zero four line up and wait (SR22 c/s)"*

Tower: *"And (SR22 c/s) the PA38 just touched and goes remaining in the right hand visual circuit runway zero four, clear for take-off surface wind light and variable"*

SR22: *"Clear for take-off (SR22 c/s) right turn (SR22 c/s)".*

Tower then transmitted to the PA38 pilot *"SR22 about to depart runway zero four with a right hand turn out VFR"*. He replied, *"copied that plane."*

The Tower controller subsequently recalled that he watched the SR22 on climb-out and was visual with both aircraft as the PA38 flew crosswind. The controller reported that the visibility was very good and that it appeared that the SR22 was going to position behind the PA38; therefore the controller continued with other tasks.

At 1739:55 both aircraft were depicted on radar replay, approximately 2nm east-northeast of Hawarden and 0.7nm apart (Figure 1).

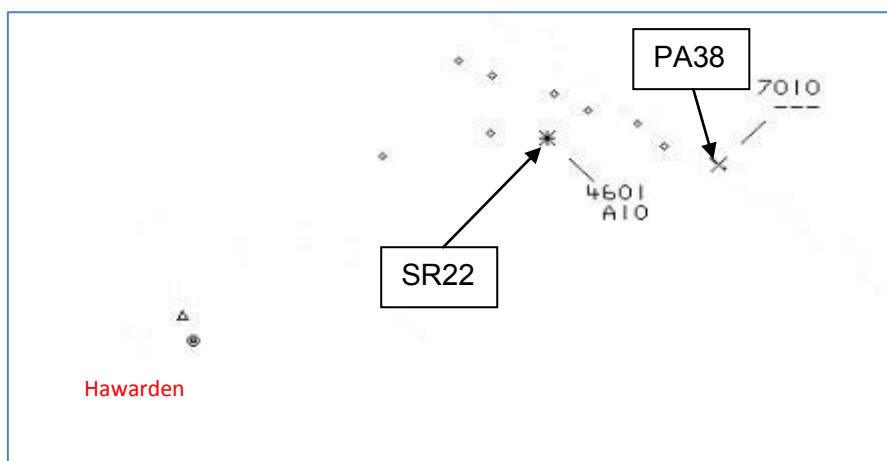


Figure 1: Clee Hill/Great Dun Fell composite – 1739:55

At 1739:59 the PA38 pilot reported, “about to turn downwind we’re visual with the cirrus close behind us”. Tower replied “Roger,” and then transmitted:

Tower: “(SR22 c/s) just confirm you’re visual with the PA38”

Tower: “(SR22 c/s) Hawarden”

Tower: “(SR22 c/s) Hawarden Tower radio check”

SR22: “(SR22 c/s) say again it’s very bad to hear you”

Tower: “Confirm you’re visual with the P A 38”

Immediately after this the PA38 pilot reported, “he’s passed over us now.” This was acknowledged by Tower but no response was received from the SR22.

Figures 2 and 3 below depict the crossing of the PA38 and SR22’s tracks between 1740:25 and 1740:32. The crossing of tracks occurred approximately 2.5nm east of Hawarden between the altitudes of 1300ft and 1400ft².

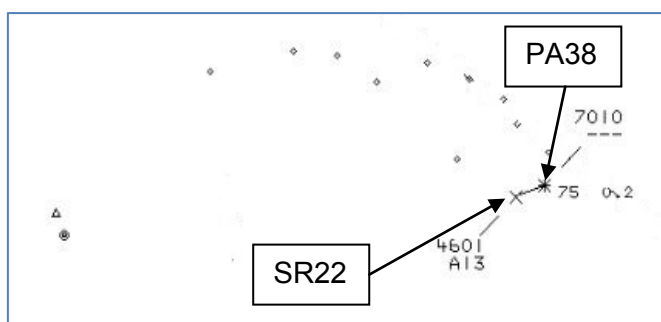


Figure 2: 1740:25

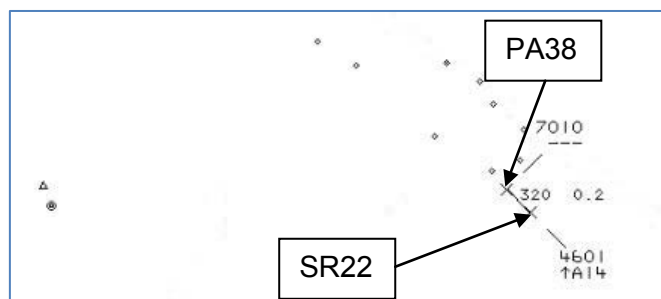


Figure 3: 1740:32

Tower transferred the SR22 to Radar at 1740:37 and the PA38 continued in the circuit to land.

The Airprox occurred when the SR22 flew through the PA38’s 12 o’clock from right to left approximately 300-400ft above the PA38. Each pilot had been provided with traffic information on the other by the Tower controller.

Summary

A PA38 pilot was flying training circuits to RW04RH, and had completed a touch-and-go, when an SR22 pilot requested a VFR departure with a right-hand turn out. The Tower controller cleared the SR22 for departure and gave the pilot traffic information on the position of the PA38. The SR22 pilot does not appear to have assimilated this information and reports that he was alerted to the PA38s presence by a TCAS Traffic Alert; he did not manage to see the PA38 throughout the occurrence.

² Radar replay processing altitude with respect to prevailing Manchester QNH, 1009hPa.

The PA38 pilot had noted that the SR22 was considerably faster than his own aircraft and reports that he maintained visual contact it. When he realised that the SR22 was turning inside his circuit he instructed his student to level at 900ft agl and the SR22 passed within 0.2nm of his aircraft with around 340-440ft vertical separation.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac and the Tower controller, transcripts of the relevant RT frequencies and radar video recordings.

GA pilot and other Board members noted first that the PA38 pilot had made particularly good use of his student and had displayed outstanding situational awareness in recognising, at an early stage, the potential for a conflict. In contrast, they also opined that the SR22 pilot seemed to have become fixated on the 'Traffic System' in his cockpit at the expense of his look-out. Moreover, the PA38 had been on the same frequency as the SR22, as it had passed the SR22's holding point during the PA38's touch-and-go immediately prior to the SR22 pilot being issued departure clearance; in the Board's judgement all of this gave the SR22 pilot ample opportunity to acquire the PA38 visually, before commencing his own departure. Furthermore, the Board noted that the SR22 pilot had a responsibility to ensure that he could see the PA38 before commencing his take-off.

The Board then considered the Tower controller's actions and noted that he had passed traffic information on the PA38 to the SR22 pilot, on more than one occasion; however, for whatever reason, the SR22 pilot did not appear to have assimilated the information. Although there appeared to be difficulty in establishing clear, two-way communication between the controller and the SR22 pilot, it was noted that the Tower controller had been persistent in his efforts to ensure that the pilots had the traffic information that they needed.

The Board went on to commend both the PA38 pilot and the Tower controller for their efforts to avoid the conflict. A ware that the CAA were conducting a review of Visual Circuit procedures and definitions, it was agreed that this Airprox would be presented to the relevant CAA General Aviation Working Group in order to help them publicise the importance of assimilating traffic information with visual cues and other sources of information in order to develop sound situational awareness.

When discussing the cause, the Board agreed unanimously that, despite the availability of traffic information from Tower and his own 'traffic system,' the cause of the Airprox had been that the SR22 pilot had not seen the PA38, and had taken-off and flown into conflict with it. In determining the risk, the Board noted that the PA38 pilot had maintained visual contact with the SR22 throughout and, consequently, had been able to achieve the eventual separation of 0.2nm; it was also clear that, if necessary, he could have continued to take further avoiding action. The Board therefore concluded that the Degree of Risk was C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The SR22 pilot flew into conflict, in the visual circuit with the PA38, which he did not see.

Degree of Risk: C

ERC Score³: 4

³ 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.