

**AIRPROX REPORT No 2014085**

Date/Time: 8 Jun 2014 1245Z (Sunday)

Position: 5456N 00250W  
(Carlisle Visual Circuit)

Airspace: Carlisle ATZ (Class: G)

Aircraft 1                      Aircraft 2

Type: Chipmunk T22      DR400

Operator: Civ Pte                      Civ Club

Alt/FL: 800ft                      1000ft  
(1015hPa)                      QNH (1015hPa)

Conditions: VMC                      VMC

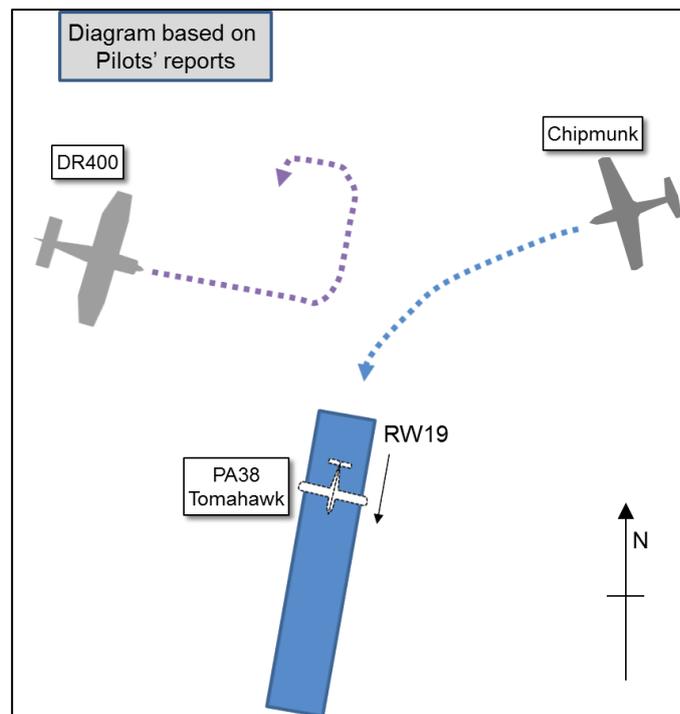
Visibility: >10km                      >10km

Reported Separation:

100ft V/150m H      0ft V/50m H

Recorded Separation:

NK V/NK H

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

**THE CHIPMUNK PILOT** reports flying a red, white and grey aircraft, VFR in VMC, with navigation lights illuminated and transponder Modes 3/A and C selected. Following a go-around, he had established his aircraft in the visual circuit and reported downwind left-hand for RW19. After establishing the Chipmunk on left-base at 75kt and 800ft, the pilot became concerned about another aircraft that was being established on right-base; he turned the Chipmunk 15° to the left to clear the nose area, whilst descending through 800ft on base-leg and looking for the other aircraft. He heard the other pilot report that he would 'orbit left' and almost immediately afterwards the 'near collision occurred'. At this point the Chipmunk was around 0.5nm to the left of the RW19 extended centre-line so the pilot continued his approach.

He assessed the risk of collision as 'High'.

**THE DR400 PILOT** reports flying a predominantly white aircraft, VFR in VMC, with strobe lights, navigation lights and the tail beacon illuminated, and squawking transponder Mode 3/A. He first contacted Carlisle ATC at a range of 16nm and was instructed to join right-base for RW19 and 'report north-abeam Carlisle town'. He recalls reporting his position twice at Gretna (10nm north of Carlisle) and, as he approached the aerodrome, he was aware of a PA38 on final approach and the Chipmunk on down-wind left-hand for RW19. On approaching the centre line, 'at about 1000ft agl', with around 1.5nm to run, the DR400 pilot could see the aircraft on final-approach and was expecting to be positioned as No.2 to it; he then heard the Chipmunk pilot report left-base and was concerned because he could not see it despite careful visual scan by himself and the other 'crew member'. 'A few seconds later', the DR400 was 'quite close to the centre-line' and the pilot heard Carlisle ATC instruct the Chipmunk pilot to position No. 2 so the DR400 pilot decided 'to remove ourselves from the area' and made an immediate left-turn away from the aerodrome, with around 45° angle-of-bank. The pilot informed ATC of his actions and received an acknowledgement and approval, then, after around 45° of turn, he saw the Chipmunk, also banking left, around '50 yards' away.

He assessed the risk of collision as 'Low'.

**THE CARLISLE TOWER CONTROLLER** reports operating in the Tower and Approach Procedural roles when the visiting DR400 pilot requested to join from the north-west and was instructed to report north of Carlisle City for a right-base join to RW19. On reporting north of the City, the DR400 pilot

was instructed to report right-base for RW19; the Chipmunk was in the left-hand circuit for RW19. Prior to this, a visiting TB09 pilot was instructed to join down-wind right-hand for RW19, but flew across the RW19 final-approach, ending up down-wind right-hand for RW25 before being instructed to turn back to join left-base for RW19. The approach, landing and taxiing for this aircraft required frequent ATC inputs and was followed by a 4<sup>th</sup> aircraft, a PA38. By this time the Chipmunk was turning left-base to RW19, No.2 to the PA38. During the previous minutes there were several occasions when two aircraft transmitted at the same time, resulting in a squealing noise on the radio frequency meaning that neither aircraft transmission was heard. Due to the number of aircraft on frequency and the number of transmissions, there was no opportunity to request unknown aircraft to repeat their broadcasts. The DR400 pilot then reported right-base and was instructed to position No.3 and to follow the Chipmunk, which was on left-base. At this point the controller could see that the DR400 was almost at final-approach to RW19, at a range of around 2- 2.5nm; the Chipmunk appeared to be 'inside' the DR400's circuit. The DR400 pilot then requested a left-hand orbit because he realised he was too close to the Chipmunk; the controller acknowledged and approved the request.

## Factual Background

The weather at Carlisle at 1220 and 1250 was recorded as:

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EGNC 081220Z 21008KT 170V250 9999 SCT027TCU SCT038 19/12 Q1015=
EGNC 081250Z 21010KT 160V240 9999 SCT027TCU SCT038 19/11 Q1015=
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## Analysis and Investigation

### CAA ATSI

ATSI had access to reports from Carlisle ATSU and the pilot of the Chipmunk, area radar recordings and RTF and transcripts of the Carlisle Tower frequency. Radar recordings did not show the incident. Carlisle Tower provides an Aerodrome Control Service without access to surveillance equipment.

At 1241:20, following initial contact with Carlisle the DR400 was instructed to report north of Carlisle City for a right-base join for RW19 and a Basic Service was agreed.

At 1244:30 the Chipmunk pilot, who had previously been in the left-hand circuit, was cleared to land but replied "*negative going around too high*". Another aircraft called the Carlisle controller and the controller acknowledged this with "*Roger*" then "*Break break [Chipmunk callsign] roger left-hand circuit*". The pilot of the Chipmunk reported that he would call downwind left. The DR400 pilot reported that he was north-abeam Carlisle and had the field in sight, and was instructed to report right-base for RW19. The Carlisle controller then became busy with two other aircraft positioning for RW19, and there were two crossed, unreadable transmissions. After the second crossed transmission, the controller asked if a Tomahawk (that was not directly involved in the Airprox), had called and the pilot of the Tomahawk reported that it wasn't him, but that he was on final. An aircraft on the ground was given taxiing instructions and there were three more crossed transmissions before the Carlisle controller asked the Chipmunk to confirm he was on final. The pilot replied "*negative just turning left base and have the final traffic in sight*". The Chipmunk was informed that he was "*number two to a Tomahawk crossing the fence*".

The DR400 pilot reported that he was "*right-base contact the one ahead*" [almost certainly referring to the Tomahawk] and was informed by the controller that he was number three to the Chipmunk on left-base. The pilot of the DR400 readback that he was number three to the Chipmunk and then asked if he could do a left-hand orbit, which was approved. There was a gap of 14 sec between the time when the pilot of the DR400 reported on right-base and subsequently requested a left-hand orbit. The written report from the pilot of the Chipmunk stated that he heard the DR400 request a left-hand orbit and, almost immediately after this call, the Airprox occurred.

When the Chipmunk was on final, the DR400 reported “*finals contact* [unreadable transmission]”. The Chipmunk was cleared to land and the DR400 was subsequently given a land-after clearance behind the Chipmunk. The pilot of the Chipmunk stated that they were still about ½ nm left of the RW19 extended centreline when the Airprox occurred. The pilot of the Chipmunk estimated the minimum distance between the two aircraft as 100ft vertically and 150m horizontally.

The written report from the pilot of the DR400 stated that as they were approaching Carlisle they became aware of the Tomahawk on final and the Chipmunk downwind. As the DR400 approached final, at around 1000ft and 1.5nm, they saw the Tomahawk and expected to position number two. The pilot of the DR400 heard the Chipmunk when it called left-base but did not see the Chipmunk. As they got closer to final they heard the Chipmunk being given number two to the landing Tomahawk, and decided to remove themselves from the area by turning left. The pilot estimated the minimum distance as 50m horizontally at the same level.

The report from the Carlisle controller stated that, when the DR400 reported on right-base, the pilot was informed he was number three and to follow the Chipmunk on left-base. At that point, the controller saw the DR400 almost on final approach for RW19, at a range of approximately 2-2.5nm. The Chipmunk appeared to be inside the DR400’s circuit. The DR400 requested an orbit as he was too close. The controller was later informed by the pilot of the Chipmunk that the DR400 had flown very close in front and below the Chipmunk. It was also reported that the Carlisle control tower faces the main RW07/25, and that traffic positioning for RW19 is behind the controller’s desk and flight progress strip display.

The DR400 was instructed to call right-base and, when he did, he was instructed to position number three behind the Chipmunk. The pilot of the Chipmunk reported that the DR400 seemed to be either on final, or left of the final approach track, when the Airprox occurred. The pilot of the Chipmunk also stated that the Airprox occurred almost immediately after the DR400 reported orbiting left, therefore it would seem that the call on right-base was made quite late. It is likely that the DR400 felt confident that they were number two to the Tomahawk (despite that not being stated), and therefore flew closer to final approach than they might have done had they been aware of their actual position in traffic. It is possible that the DR400 tried to call earlier and was one of the crossed transmissions. The controller was occupied with other landing traffic and giving taxiing instructions, and did not see the two aircraft until they were on final approach. The confliction was not evident to the controller.

The written report from the pilot of the DR400 stated that he was aware of the Tomahawk, and the Chipmunk when it was downwind. An earlier order of landing in combination with specific Traffic Information may have allowed the DR400 to plan his flight path appropriately, and position correctly into the circuit.

### **UKAB Secretariat**

The DR400 pilot was required to position his aircraft number three to land behind the Tomahawk and the Chipmunk, as instructed by Carlisle Tower.<sup>1</sup>

### **Summary**

An Airprox occurred between a DR400 and a Chipmunk on final approach to RW19 at Carlisle Airport. The Chipmunk was operating on a VFR local flight from Carlisle and was in receipt of an Aerodrome Control Service from Carlisle Tower. The DR400 was on a VFR flight to Carlisle and was in receipt of an Aerodrome Control Service from Carlisle Tower on the same frequency as the Chipmunk. Because radar recordings did not capture the incident, the exact geometry of the Airprox cannot be measured.

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<sup>1</sup> Rules of the Air 2007, Rule 13, Order of Landing

## **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.

Members noted that operating opposing circuits, whilst perfectly normal and beneficial at many aerodromes, requires more positive communication and vigilance from all involved. It was clear that the DR400 pilot, being the new arrival to the circuit, had a duty to integrate with the other aircraft already in the visual circuit; however, members agreed that he would have been better equipped to do so had ATC provided earlier Traffic Information or an earlier instruction to position as No 3. Unfortunately, at the time, the controller was distracted and had an increased workload whilst assisting another pilot. Some members opined that the DR400 pilot would have been better served by electing for an overhead join and, equally, the controller could have instructed him to join in that manner. Members agreed that both pilots had realised, on base leg, that they could not see the other aircraft and could not continue, but by this stage they had few options available to them; the Chipmunk pilot had turned slightly to get improved forward visibility, and the DR400 pilot had sensibly elected to turn away (although he could not have been certain if he was turning away from, or towards the Chipmunk). The Board agreed that the cause was that the DR400 pilot had flown into conflict with the Chipmunk, but recognised that the lack of Traffic Information and late sequencing instruction from ATC had been contributory. The Board noted that the two aircraft had been on directly opposing flight-paths and, although the DR400 pilot's turn had increased separation, they agreed that this had been almost entirely fortuitous because he could not see the Chipmunk at the time of the turn; consequently, they assessed the degree of risk as A.

## **PART C: ASSESSMENT OF CAUSE AND RISK**

<u>Cause:</u>	A lack of sufficient Traffic Information resulted in the DR400 pilot flying into conflict with the Chipmunk, which he did not see.
<u>Contributory Factor(s):</u>	ATC did not exercise sufficient positive control.
<u>Degree of Risk:</u>	A.
<u>ERC Score<sup>2</sup>:</u>	100.

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<sup>2</sup> 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.