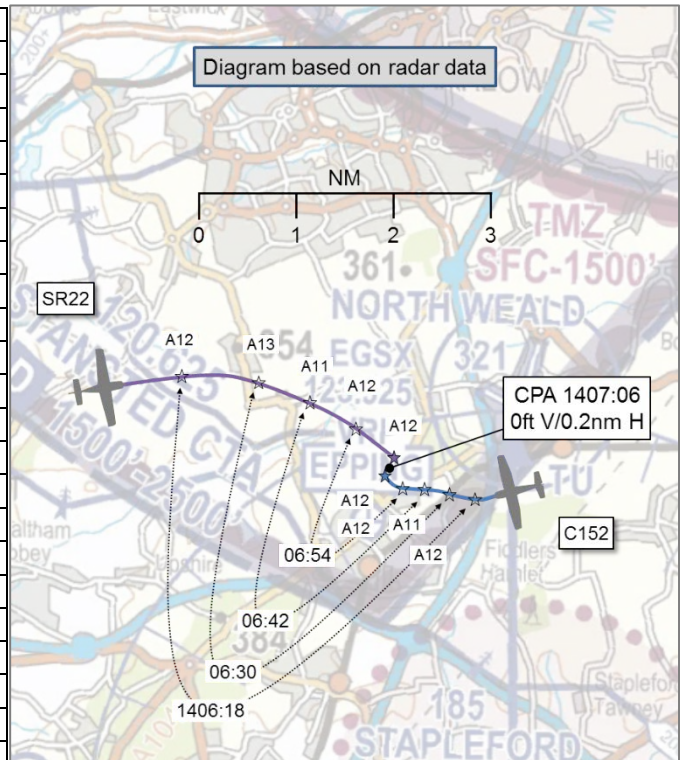


AIRPROX REPORT No 2018224

Date: 17 Aug 2018 Time: 1407Z Position: 5143N 00007E Location: North Weald – elev 321ft

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	SR22
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	North Weald	North Weald
Altitude/FL	1200ft	1200ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, red, blue	NK
Lighting	Beacon	NK
Conditions	VMC	NK
Visibility	>10km	NK
Altitude/FL	800ft	NK
Altimeter	QFE (1008hPa)	NK
Heading	020°	NK
Speed	90kt	NK
ACAS/TAS	Not fitted	NK
Alert	N/A	NK
Separation		
Reported	0ft V/100m H	Not reported
Recorded	0ft V/0.2nm H	



THE C152 INSTRUCTOR reports that she was returning to North Weald from an instructional flight in the local training area; the student pilot’s first lesson. In accordance with local procedure, she radioed overhead Chipping Ongar for airfield information and was advised of RW20 in use with a right-hand circuit, QFE 1008, with no circuit traffic indicated. She positioned the aircraft to join the circuit on the crosswind leg. She was aware of a radio call from an unspecified callsign re-joining the circuit but did not recall hearing a specific reporting point nor an intention of the type of join to be made. Regardless, to assist the other pilot with their situational awareness she advised that they had joined the circuit and were currently on the crosswind leg. She flew the aircraft in the locally established circuit, making a right turn at the appropriate point to position for the downwind leg. When established on the downwind leg, and whilst talking the student through elements of the approach and the pre-landing checks, she became aware at a very late stage of a silver Cirrus aircraft which crossed the established downwind leg from the left and then made a steep left turn, cutting ahead of them and passing in close proximity. The C152 instructor noted that the Cirrus had passed ahead at high speed and that there was only sufficient time to make a slight jink to the left to take avoiding action. The Cirrus pilot then reported themselves as being downwind and that they were ‘number 1 for landing’. The C152 instructor also made a radio call straight afterward advising that she too was downwind and that she was visual with the Cirrus that had cut in front of them.

She assessed the risk of collision as ‘High’.

THE SR22 PILOT did not submit a completed Airprox report form as requested but instead provided a narrative of events.

The SR22 pilot was about 8 miles out to the west and inbound to North Weald. He got on frequency and called for information; there was no mention of the other aircraft on the radio at that time. He was given the QNH and RW20, a join that he had done hundreds of times. From his location he could have

joined right base to RW20 or do the norm and pick up a downwind track. He chose the latter as it's the preferred method and headed to join the downwind. He saw an aircraft on crosswind that was climbing out. It was, in his opinion, heading out to the west as it was outside what he would consider the traffic pattern. This confirmed it was no threat to him as they had different intentions. At about the midfield point, heading on a reciprocal to downwind, he then saw the aircraft that he had thought was heading west turn downwind. At this point there was no issue and the other aircraft was in the 1 o'clock. He had two choices, firstly to turn 180° to his left and join downwind or turn to his right. The latter action would have made him blind to the other aircraft and put him in its course. The obvious decision and safest was to turn the 180° left and pick up a slightly early downwind. There was no issue, no threat and he felt certainly no Airprox. Once turned he was on downwind and doing his checks. He heard on the R/T the other aircraft discussing his actions and apparently stating he had cut them up. He didn't entertain these comments as he was downwind and in the process of downwind checks. He recalled thinking it was a ridiculous comment as the other aircraft was positioned so far out of circuit. The SR22 pilot commented that that happened a lot with the training schools at North Weald, where they were flying massive circuits. He presumed it understandable given that they had lots going on re talking the pattern and circuits get bigger as time is taken up with teaching. The SR22 pilot noted that he turned base, called final, landed, taxied a 5 minute route to the apron and was doing the shutdown checks when, just before he shut down he heard the other aircraft call final. This compounded his comment earlier about circuits being extended too much. If he had actually cut this aircraft up how could he have turned base, landed, taxied (which took several minutes) before this other aircraft had called final? The SR22 pilot stated that there was no cutting up and there was no Airprox. He commented that with North Weald being where it was it didn't lend itself to an overhead join because of the Stansted TMZ; it's not preferred to join on a base leg with circuit traffic, so his entry was perfectly acceptable and his actions when realising the other aircraft was in the circuit was the preferred and safest option for all concerned. This was a simple realisation of traffic within a circuit that, had the other aircraft been in a more standard circuit pattern, would not have happened in his opinion. He was not quite sure how an Airprox could be considered in relation to a circuit as the whole nature of circuits is all about several aircraft in close proximity and filtering in to the said circuit. Finally, he commented that there had been several discussions with North Weald and the flying school to try and encourage them to tighten up their patterns, especially with a RW20 pattern, with Stansted CTR in essence at the end of the RW20 downwind leg, which was real issue.

The SR22 pilot did not make an assessment of the risk of collision.

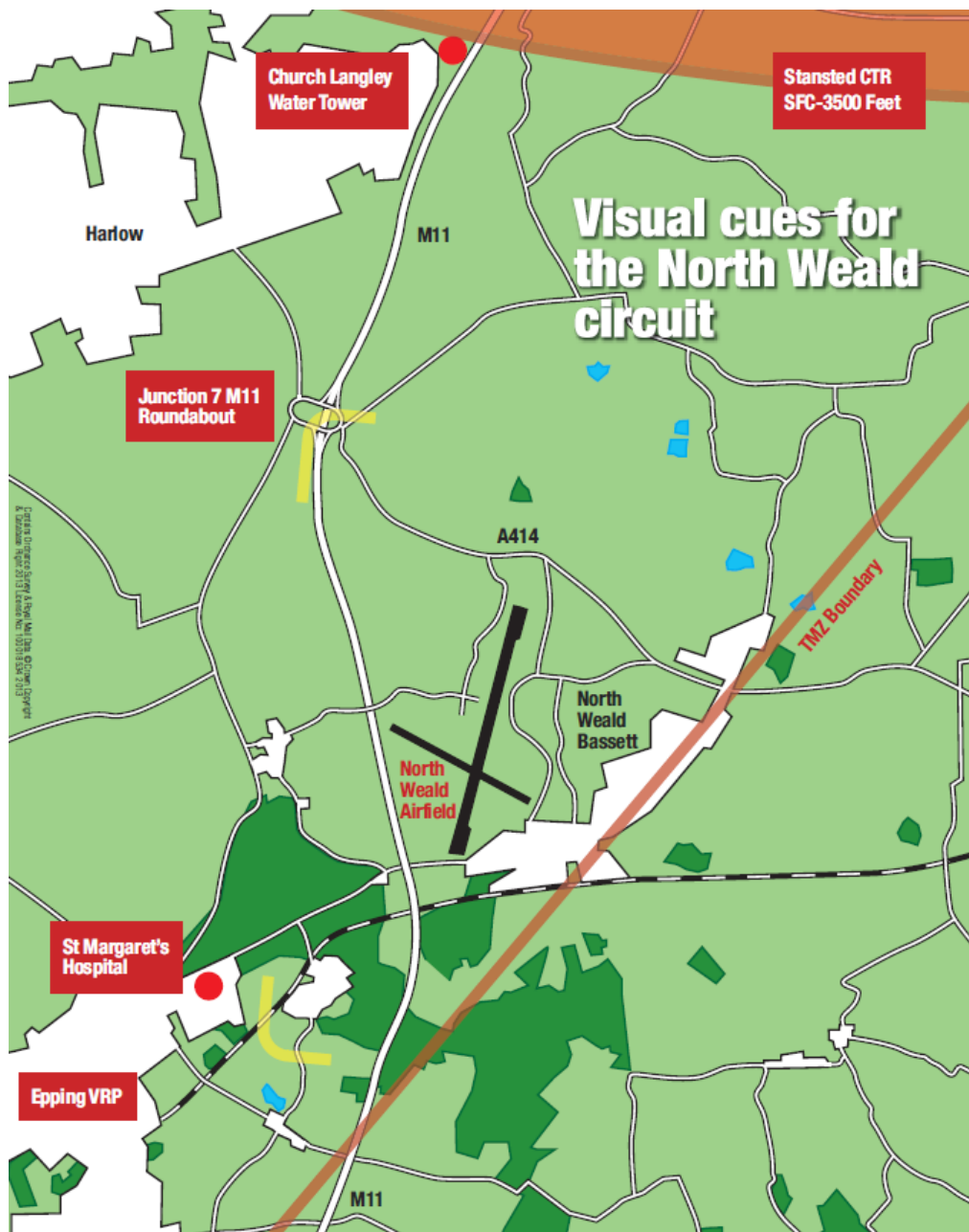
THE NORTH WEALD A/G OPERATOR reports that at the moment of the Airprox his attention was on his flight strips, which he was completing for the computer database, and that he did not see the Airprox. The SR22 pilot called downwind to which he replied 'Roger'. He then glanced out the window to establish the position of the C152 to give Traffic Information to the SR22 pilot, at the same time trying to pinpoint where the downwind SR22 had joined. Before he could say 'one other aircraft in the circuit' he then heard what he could only describe as an upset tone of voice from C152 pilot calling downwind and that they had been cut up in the circuit. He saw the SR22 finishing his turn onto downwind, about the middle point of the airfield, and the C152 was also midpoint downwind at that point. He couldn't tell from the angle of the turn from the SR22 whether he had joined from the west for the downwind leg or had joined from the east. He didn't hear a crosswind call if the latter was the case. The C152 and SR22 were the only aircraft in the circuit so the circuit traffic level was low and not busy.

Factual Background

The weather at Stansted was recorded as follows:

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METAR EGSS 171420Z AUTO 25010KT 220V300 9999 NCD 22/09 Q1019=
METAR EGSS 171350Z AUTO 26009KT 210V300 9999 BKN047 21/09 Q1020=
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The pilot's briefing pack on the north Weald website provides the following diagram as a guide to visual circuits (turn points indicated in yellow):



Analysis and Investigation

UKAB Secretariat

The C152 and SR22 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation².

Summary

An Airprox was reported when a C152 and a SR22 flew into proximity in the North Weald visual circuit at 1407hrs on Friday 17th August 2018. Both pilots were operating under VFR in VMC in receipt of an AGCS from North Weald.

¹ SERA.3205 Proximity.

² SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the A/G Operator involved.

Members first discussed the C152 Instructor's actions and agreed that she had joined the circuit correctly and was established in the visual circuit at the time of the Airprox. Therefore, it was for the joining SR22 pilot to integrate with the C152. The SR22 pilot reported seeing the C152 'climbing out' on crosswind but the radar replay indicated that it was level within 100ft. Similarly, the SR22 pilot reported that the C152 was 'in his opinion heading out to the west as it was outside what he would consider the traffic pattern', yet the radar replay indicated that the C152 pilot turned downwind about ½nm west of the position indicated on the North Weald publication 'Visual cues for the North Weald circuit'. As such, members agreed that the C152 was following the normal pattern of traffic, which the SR22 pilot would no doubt have observed if he had monitored the C152's position. Members agreed that it was for the joining SR22 pilot to integrate with the pattern of traffic intending to land (the C152) and that it was therefore his responsibility to monitor other aircraft, whether they were departing the circuit or not, to ensure that any assumptions regarding traffic intentions were correct. The Board agreed that by deciding on his course of action and apparent disregard for the C152, the SR22 pilot did not integrate with the C152 and flew into conflict with it. Notwithstanding, although members agreed that safety had been reduced, they also noted that the SR22 and C152 pilots had seen each other at sufficient range that, at 0.2nm separation at CPA, the risk of collision had been averted.

One comment from the SR22 pilot caused particular concern to the Board, namely 'At about the midfield point, **heading on a reciprocal to downwind**, he then saw the aircraft that he had thought was heading west turn downwind'. Although it was apparent from the radar replay that he was not heading on a reciprocal to downwind, members wondered to what degree the SR22 pilot was aware of his positioning and of an appropriate technique to join a visual circuit pattern. The Board noted that time spent with a locally based instructor after an incident where normal procedures had not been used could often serve to highlight misperceptions or lack of understanding, and to retrain appropriate behaviours.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The SR22 pilot did not integrate and flew into conflict with the C152 in the visual circuit.

Degree of Risk: C.

Safety Barrier Assessment³

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the SR22 pilot did not integrate with the visual circuit.

Tactical Planning was assessed as **partially effective** because the SR22 pilot chose to join the visual circuit directly ahead of the C152 instead of formulating a more appropriate plan to integrate effectively.

Situational Awareness and Action were assessed as **partially effective** because the C152 pilot had heard the SR22 pilot call on the frequency so knew it was joining the circuit at some point in the near future, but the SR22 pilot did not assimilate that the C152 was already in the visual circuit.

³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

See and Avoid were assessed as **partially effective** because although the SR22 pilot was visual with the C152, he did not avoid it by a suitable margin.

