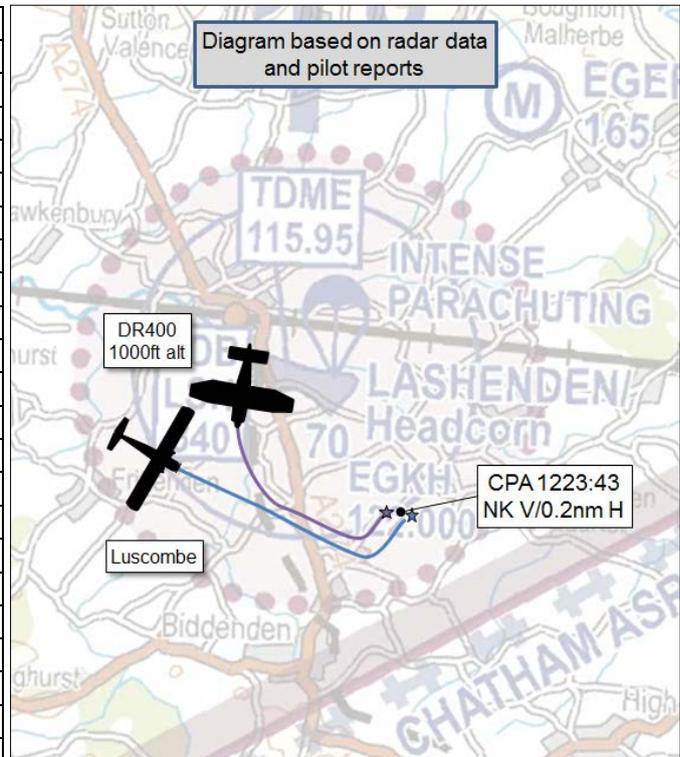


## AIRPROX REPORT No 2017212

Date: 29 Aug 2017 Time: 1220Z Position: 5108N 00040E Location: Lashenden Airfield

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	Luscombe	DR400
Operator	Civ Club	Civ Trg
Airspace	Lashenden ATZ	Lashenden ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Lashenden	Lashenden
Altitude/FL	1000ft	NK
Transponder	A	A, S
Reported		
Colours	Cream, Red	Blue, White
Lighting	Strobe	Nav, Strobe
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1000ft	1000ft
Altimeter	QFE (1010hPa)	QFE (1010hPa)
Heading	020°	010°
Speed	70kt	85kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	20ft V/<100m H	50ft V/300m H
Recorded	NK/0.2nm H	



**THE LUSCOMBE PILOT** reports that he was joining downwind and had made a downwind call abeam the upwind end of RW28. The DR400 was seen carrying out a low go-around from RW28 at this time. He continued the downwind leg and turned onto base, slightly wide due to an aircraft ahead flying a wide circuit. As he completed the base turn, the DR400 was seen approaching from his 9 o'clock at a distance of approximately 100-150m. He made a steep descending 90° right turn and levelled off at approximately 600ft AGL. Turning back towards the runway, he sighted the DR400 turning onto final for RW28 and positioned behind to land. He later located the DR400 pilot who professed to have heard his downwind call but failed to locate him visually throughout the circuit.

He assessed the risk of collision as 'High'.

**THE DR400 PILOT** reports that the circuit was busy. He was downwind and thought that, based on radio transmissions, there was one aircraft ahead and one behind. He didn't have visual contact with the Luscombe but kept looking for it and slowed, without applying flaps. He established visual contact as the Luscombe turned base, following normal landing procedures, and as he turned final, he realised that, due to the other aircraft's slower speed, he would still catch up with it. He decided that he would need to go-around and configured the aircraft accordingly, keeping well south of the RW to achieve this. He rejoined the circuit and landed. On the ground he was approached by the Luscombe pilot who asked if he had seen him. He said that he had heard the Luscombe report downwind but he was not visual until the Luscombe had turned base. The Luscombe pilot said that he had had to make a diving right turn to avoid a collision, although he did not clarify at what point he had made the manoeuvre.

[UKAB note: From the radar replay data, the DR400 pilot's recollection of events matches a previous circuit where he was following a Jodel downwind. The Airprox occurred after the described go-around to rejoin the circuit to land].

## Factual Background

The weather at Lydd was recorded as follows:

METAR EGMD 271150Z 27015KT 9999 BKN035 11/08 Q1013

## Analysis and Investigation

### UKAB Secretariat

The Luscombe and DR400 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. 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 operation<sup>2</sup>.

Figure 1 shows the DR400 climbing after the go-around with the Luscombe downwind. Figure 2 then shows the DR400 catching up the Luscombe towards the end of the downwind leg. The Luscombe turns onto base-leg, closely followed by the DR400 (Figure 3), after which, the Luscombe turns right to avoid the DR400 (Figure 4).

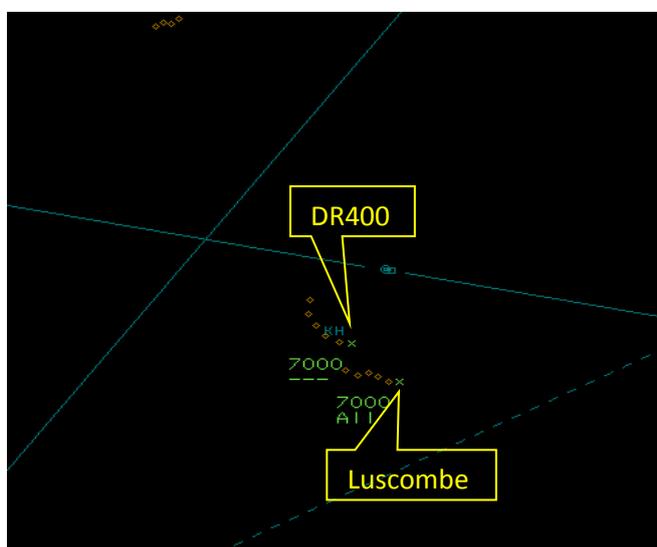


Figure 1: 1223:13

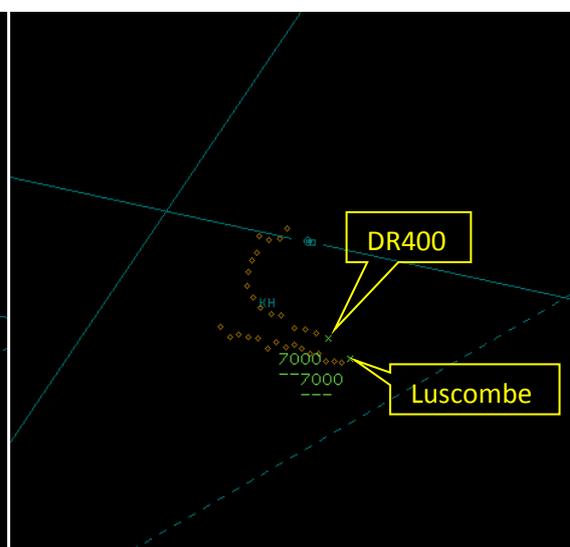


Figure 2: 1223:36

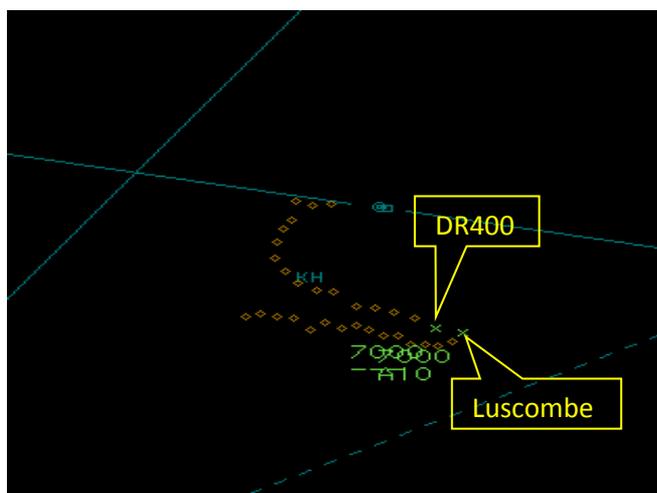


Figure 3: 1223:46 (CPA)

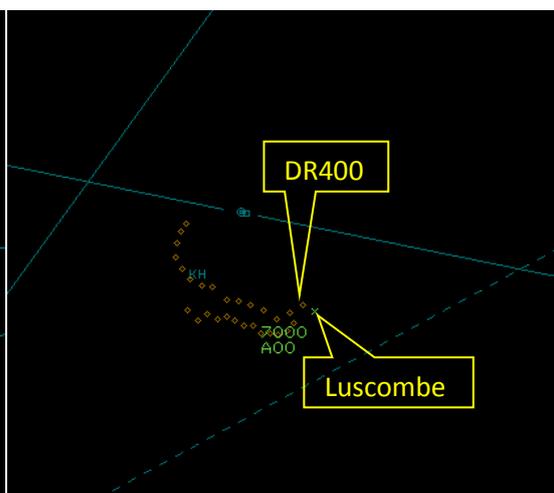


Figure 4: 1224:02

## Summary

<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3225 Operation on and in the Vicinity of an Aerodrome.

An Airprox was reported when a Luscombe and a DR400 flew into proximity at approximately 1220 on Tuesday 29<sup>th</sup> August 2017. Both pilots were operating under VFR in VMC, both pilots in receipt of an AGCS Service from Lashenden.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings and reports from the Air/Ground Operator involved.

The Board began by looking at the actions of the DR400 pilot. They were informed that the radar replays indicated that the report submitted by the DR400 pilot related to a previous circuit and not the Airprox with the Luscombe. As a result, the information contained within the DR400 pilot's report was not directly relevant to the debate. From the radar pictures, members noted that the DR400 pilot had not seen the Luscombe joining the visual circuit and had flown a slightly tighter circuit than the Luscombe before turning onto base-leg at the same time as the Luscombe pilot. This had resulted in the DR400 pilot closing on the Luscombe from the Luscombe pilot's left. Having later commented to the Luscombe pilot on the ground that he had heard the Luscombe pilot's radio calls, members wondered why he had continued with his circuit rather than either extend upwind or depart the visual circuit and reposition. Having not done so, members noted that it had been the DR400's greater speed and tighter circuit that had caused the DR400 pilot to catch the unsighted Luscombe as the latter turned onto base-leg. The GA member commented that this was a prime example of the need to use all the safety barriers available in the visual circuit. Listening out for other pilots' position reports was vital to maintaining situational awareness, but lookout remained the primary safety barrier that needed to be robustly maintained at all times, especially in anticipation that radio calls might be missed or even not present if other aircraft were non-radio.

The Board then looked at the actions of the Luscombe pilot. They agreed that he had been aware of the DR400 going around but, after joining downwind, had lost sight of the DR400 as it went behind the Luscombe. Being alert to the presence of the DR400 somewhere behind, his first opportunity to check on its position again was when he turned onto base-leg wherein he spotted the DR400 converging from his left and immediately turned right to avoid. Members commended the Luscombe pilot for his pro-active attempts to maintain situational awareness on the other aircraft in the circuit; had he not done so then a far more serious outcome could have resulted.

The Board then looked at the cause and risk of the Airprox. They agreed that the DR400 pilot had not seen the Luscombe throughout his circuit, and that, other than during its go-around, the Luscombe pilot had not really had an opportunity to see the DR400 until he turned onto base-leg. Some members wondered whether the cause should be described as a non-sighting/late sighting. Others noted that the Luscombe pilot had made appropriate radio transmissions which had reportedly been heard by the DR400 pilot, and so the incident did not rest solely on visual sighting. The majority agreed and, noting that the Luscombe was ahead of the DR400 in the circuit, the Board decided that the incident was best described as the DR400 pilot not integrating effectively with the Luscombe. Turning to the risk, the Board agreed that neither pilot had effectively seen the other until the Luscombe pilot had turned onto base-leg, at which point the Luscombe pilot had spotted the DR400 and carried out emergency avoiding action. Accordingly, the Board determined that safety had been much reduced below the norm, and they therefore assessed the risk as Category B.

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

Cause: The DR400 pilot did not integrate effectively with the Luscombe.

Degree of Risk: B.

### Safety Barrier Assessment<sup>3</sup>

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

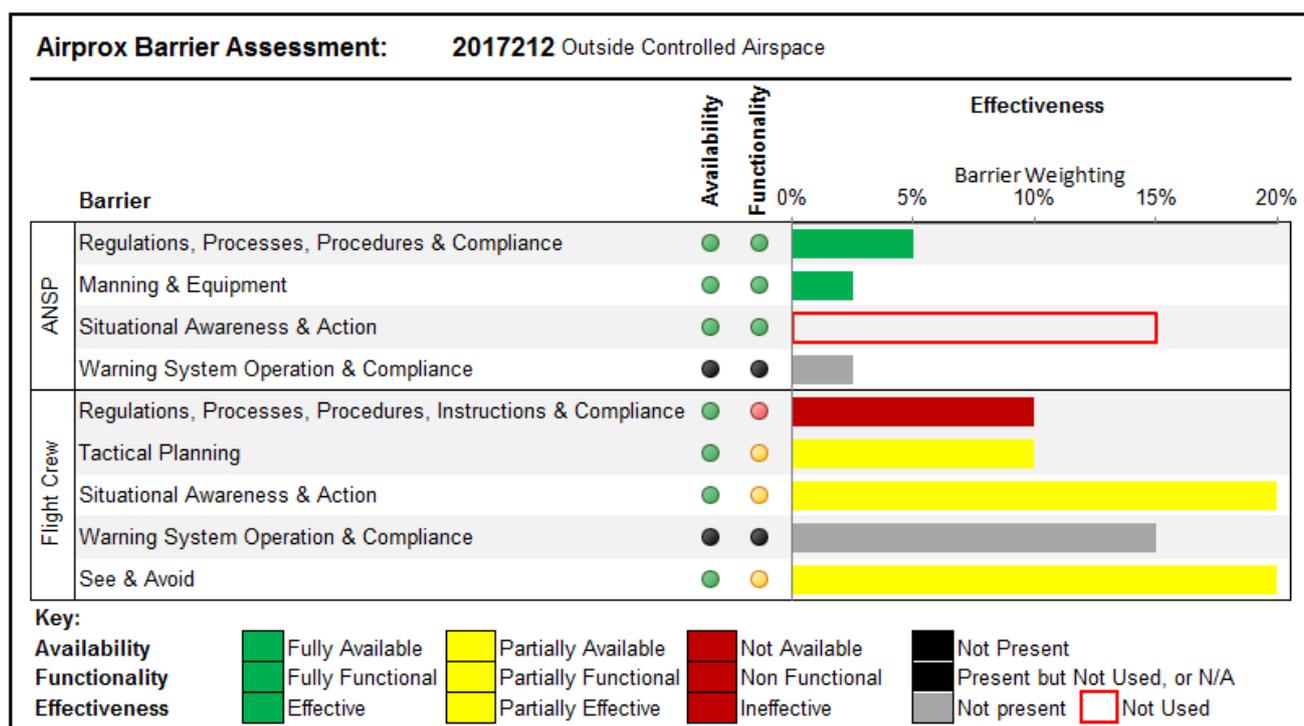
#### Flight Crew

**Regulations, Processes, Procedures, Instructions & Compliance** was assessed as **ineffective** because the DR400 pilot did not safely integrate with the other aircraft in the visual circuit.

**Tactical Planning** was assessed as **partially effective** because the DR400 pilot did not change his plan when he heard the Luscombe pilot's radio calls even though he was not visual with it in the circuit.

**Situational Awareness & Action** was assessed as **partially effective** because, although the relevant calls were made by the pilots, the DR400 pilot did not use the information to adequately sequence himself in the visual circuit.

**See and Avoid** was assessed as **partially effective** because the Luscombe pilot only saw the DR400 late (and had to take emergency avoiding action), whilst the DR400 pilot did not see the Luscombe at all.



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