

AIRPROX REPORT No 2012143

Date/Time: 13 Sep 2012 1035Z

Position: 5251N 00245W (1nm FIN
APP RW23 Sleaf - elev 275ft)

Airspace: ATZ (Class: G)

Reporting Ac Reporting Ac

Type: Slingsby T67M C152

Operator: Civ Club Civ Club

Alt/FL: 500ft 300ft
QFE (1011hPa) QFE (1011hPa)

Weather: VMC CLOC VMC CLBC

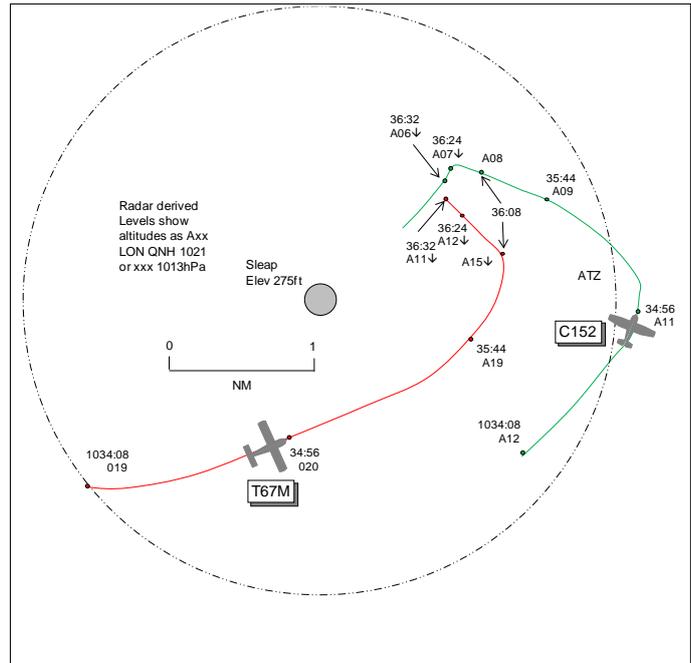
Visibility: >10km >10km

Reported Separation:

100ft V Not seen

Recorded Separation:

NR



BOTH PILOTS FILED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE SLINGSBY T67M PILOT reports flying a solo local sortie from Sleaf, VFR and in receipt of an A/G service from Sleaf Radio on 122.45MHz, squawking 7000 with Mode C. The visibility was >10km clear of cloud in VMC and the ac was coloured yellow with strobes and landing light switched on. He rejoined the cct from the W after carrying out aerobatics and was visual with an ac about to descend deadside whilst his ac was on the liveside at 2000ft in a downwind position for RW23 LH cct. He was also visual with an ac on short final about to touchdown. He decided to practise a glide approach from his current position as no ac would conflict with this so he radioed his intentions and checked no other ac were downwind by asking on the radio. No replies were received so he closed the throttle and set up a downwind glide at 70kt and then turned L base, looking out for other traffic, before then turning onto final. He called "final" and then another ac's pilot called "final for a go-around". He looked out and saw nothing so thought the other ac must be behind his ac and its pilot had seen him so he carried on with his approach. On very short final around 600ft Sleaf Radio called, "(T67M c/s) another ac is on final". He replied, "I'm on short final" and looked for the traffic but still saw nothing. A moment later at around 500ft the other ac, a C152, appeared below (about 100ft) and slightly in front. He immediately opened full throttle and climbed away in a go-around to the R of the RW. He assessed the risk as high.

THE C152 PILOT reports flying a local sortie with a passenger from Sleaf, VFR and in receipt of an A/G service from Sleaf Radio on 122.45MHz, squawking 7000 with Modes S and C. The visibility was >10km flying 5000ft below cloud in VMC and the ac was coloured blue/white with strobe and landing lights switched on. He had departed at about 1015 for cct practice RW23 LH cct with a cct height 1000ft and conducting touch and go landings. He made 'blind' position calls to identify when he was "downwind for touch and go" and "final for touch and go". He maintained a lookout, seeing and hearing other traffic talking to Sleaf A/G Radio Operator. On his third downwind leg the RT was busy with radio communications preventing a normal 'downwind' call so he consequently declared "late downwind" when the frequency became clear to indicate that he was nearing the end of the downwind leg. He turned onto base leg prior to Wem to comply with the noise abatement procedures and configured the ac for landing (landing light on, 2 stages of flaps and 70kt) whilst descending from 1000ft to 700ft. At 700ft he turned L onto final approach heading 230° for RW23 and made a blind call, "(C152 c/s) final touch and go". Whilst his attention was focussed on the RW

numbers he saw no other ac in front, above, below or to either side. On previous approaches, the A/G Operator has passed surface wind direction and speed but he could not recall these being given on this approach. However, having just declared his position he heard another ac's pilot declare, "[T67M] c/s short final". He instantly checked for other traffic but saw nothing in front, above, below or either side and was unable to check above/behind owing to his ac's high-wing configuration. Before he could respond further, the A/G Operator informed the other ac's pilot that his C152 was already on final approach. The other pilot responded in a way that indicated that he had just seen his C152 and declared, "going around". He couldn't see the T67M but was now satisfied that its pilot was taking avoiding action so he decided to continue his approach to land as he didn't want to conflict with any avoiding action taken by the T67M pilot; by now he was descending through 300ft QFE. He made a touch and go before completing a fourth and final cct for landing. He assessed the risk as high. Later he discussed the incident with the A/G Operator, the Duty FI, and also had a face-to-face debrief with the T67M pilot to try and understand how the Airprox occurred and what lessons could be learned.

THE SLEAP A/G OPERATOR reports the T67M flight conducted a non-standard join, a downwind descent from 2000ft and called short final on a glide approach. The C152 pilot had already called "final" during a standard cct. The T67M descended above the C152, coming within 50ft of it, its pilot had been told there was already 1 ac [the C152] on final.

Unofficial Met Ob was provided: - 24012KT CAVOK=

ATSI reports the Airprox occurred at 1036:37 UTC, on the final approach for RW23 at Sleap Aerodrome and within the Sleap ATZ, Class G airspace, which consists of a circle radius of 2nm centred on RW05/23, extending from the surface to a height of 2000ft above the aerodrome elevation (275ft above mean sea level).

The C152 was conducting a VFR cct detail on RW23 LH, following the Sleap cct procedures using QFE 1011hPa. The C152 pilot was in communication with Sleap Radio (A/G) on frequency 122.45MHz. The Slingsby T67M was operating VFR from Sleap aerodrome and was returning to Sleap from the W after the completion of an aerobatic flight. The T67 pilot was in communication with Sleap Radio (A/G) on frequency 122.450MHz.

Sleap Aerodrome is promulgated as providing A/G within the notified hours of operation. Sleap ATZ is located within the RAF Shawbury MATZ. The UK AIP entry for Sleap EGCV AD 2.22 states:

- 1(c) Join overhead at 2000ft QFE
- 3(a) Circuit height 1000ft QFE

CAA ATSI had access to: area radar recordings; written reports from both pilots; written report from the Sleap A/G operator. RT recordings are not available at Sleap Aerodrome. The area radar system QNH was 1021hPa. The multi-radar tracking mode of the area radar suffered from some slight track deviation as the 2 ac turned onto final approach, but provided a good indication of the relative positions of the 2 ac.

The Shawbury weather is provided:

METAR EGOS 130950Z 26013KT 9999 FEW022 13/07 Q1020 BLU NOSIG=
METAR EGOS 131020Z NIL=
METAR EGOS 131050Z 24012KT 9999 FEW030 15/08 Q1019 BLU NOSIG=

The C152 pilot reported conducting standard ccts RW23 LH at 1000ft QFE, with 'touch and go' landings and blind position reports when downwind. On the third downwind leg the C152 pilot reported that the RT was busy, preventing the normal downwind call, but he subsequently reported late downwind.

The T67M pilot reported rejoining from the W and that when in the live downwind position at 2000ft QFE, the T67M pilot was visual with 1 ac descending deadside and 1 ac on short final. The T67M

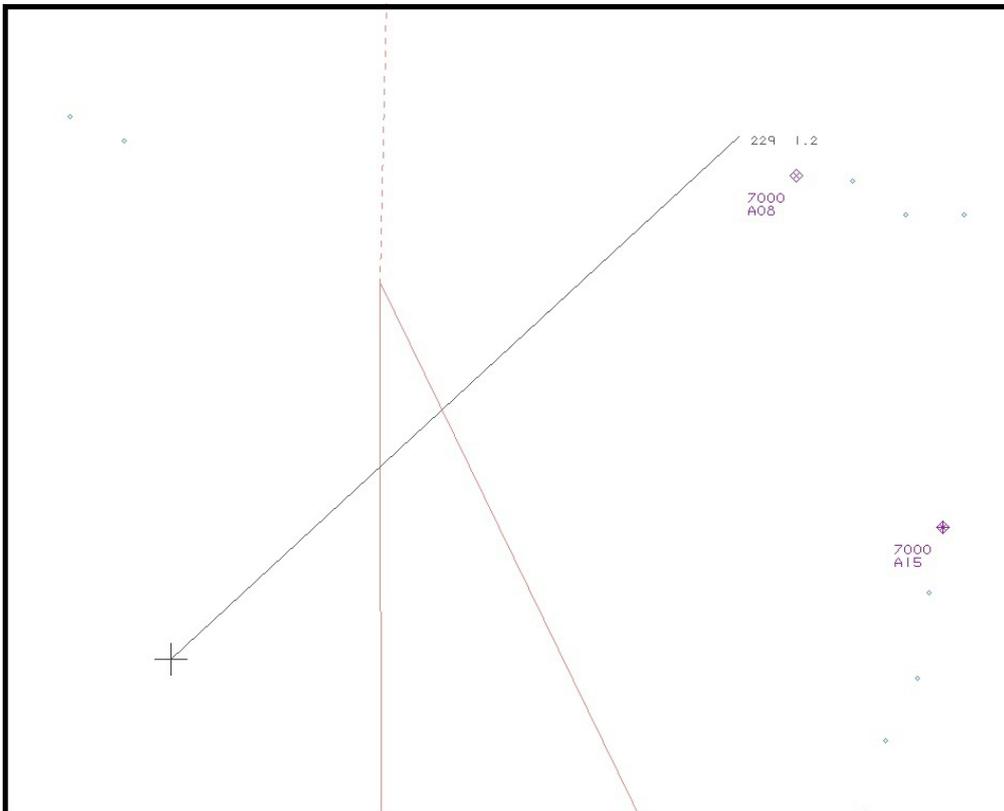
pilot decided to practise a glide approach determining that no other ac was likely to affect the approach.

[UKAB Note (1): The radar recording at 1034:08 shows the T67M 2nm SW of Sleaf tracking E'ly level at FL019 (altitude 2100ft or height 1825ft QFE) with the C152 1.7nm SE of Sleaf downwind LH for RW23 indicating altitude 1200ft (925ft QFE).]

At 1034:56, radar shows the C152 at an altitude of 1100ft (Height 825ft), turning base leg in the standard cct pattern. The T67M is shown at FL020 (Height 1900ft) commencing the downwind leg in a short cct pattern.

The C152 pilot reported that he descended on base leg and turned onto final at 700ft, reporting "final touch and go". At 1035:44, radar shows the C152 established on L base at a range of 1.6nm from the threshold of RW23 indicating altitude 900ft (675ft QFE). The T67M is shown at an altitude 1900ft (1625ft), late downwind 1nm SE of the threshold.

The T67M pilot's written report indicates that he may have heard another ac's pilot call on final but as he turned L base, he wasn't aware of another ac on final. At 1036:08, the C152 is shown at altitude 800ft (height 525ft) on a closing heading and 1.2nm from touchdown. The T67M is shown at altitude 1500ft (height 1225ft), on L base in a continuous L turn as shown in picture 1 below.



Picture 1 – 1036:10

At 1036:24, the T67M is shown to continue the L turn inside the C152 which was turning onto final approach. The 2 ac continued to converge, with the T67M making a steeper glide approach from above the C152.

[UKAB Note (2): At 1036:32 the C152 is established on final approach descending through altitude 600ft (325ft QFE) with the T67M in its 11 o'clock range 0.1nm indicating altitude 1100ft (825ft QFE). The T67M disappears from radar on the next radar sweep as the C152 continues its descent on final approach. The CPA is not captured as the T67m only reappears N abeam the Sleaf O/H as the C152 disappears during its touch and go.]

The T67M pilot indicated that when on final he heard another ac's pilot calling final for a go around but saw nothing and continued with the approach. The T67M pilot indicated that Sleep Radio advised him that there was another ac on final. The T67M pilot indicated that he sighted the C152 below and applied full throttle and climbed away.

The Sleep A/G operator's written report indicates that the T67M conducted a non-standard join downwind descending from 2000ft and called short final using a glide approach. The C152 had already called final when the A/G operator observed the T67M descending from above the C152. The A/G operator reported that the T67M had been told that there was already 1 ac on final.

The 2 ac were operating in the Sleep ATZ, within Class G airspace, in contact with Sleep Radio (A/G) and not in receipt of an ATS. The cct and RT reporting was considered to be at medium levels of traffic. The T67M pilot decided to conduct a non-standard join from the downwind position at 2000ft QFE for a glide approach, without being fully aware of the other traffic in the cct. This resulted in the T67M making a short cct pattern from 2000ft and turning onto short final above the C152 on the normal approach.

The RoA Rule 12(a) states:

'that the commander shall... conform to the pattern of traffic formed by other aircraft intending to land at that aerodrome or keep clear of the airspace in which the pattern is formed...'

The Airprox occurred when the T67M commenced a non-standard join from 2000ft in the downwind position for a practice glide approach, without being fully aware of the other traffic in the cct. This resulted in a much shorter pattern and high approach which brought the T67 into conflict with the C152 on a normal approach path.

The Sleep Radio operator observed the T67M descending from above the C152 and advised the T67M pilot that there was another ac on final. The situation was resolved when the T67M pilot sighted the C152 and broke off the approach.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar video recordings, reports from the A/G Operator involved and reports from the appropriate ATC authorities.

Without the benefit of an RT transcript, it was unclear to Members as to the timings and content of the T67M and C152 pilots' transmissions on the Sleep frequency. Consequently the pilots' recollections of what they thought was broadcast or heard during the evolution could not be clarified. The C152 pilot was carrying out a cct detail and, as shown on the radar recording, had established a cct pattern ahead of the T67M's arrival in the Sleep O/H. The T67M pilot had flown to the O/H and then elected to carry out a glide approach from a high-downwind position by flying a tight cct close-in to the RW. The GA pilot Member commented that when intending to carry out a non-standard cct, the onus was on the pilot to ensure that there were no other ac which would conflict with his flight profile. However, the T67M pilot's mental picture of the cct state was erroneous as he had not assimilated that the C152 was ahead on a wider cct. Although he had tried to improve his SA from the RT exchanges, his primary method of cct integration was through see and avoid. Members commented that SA is significantly improved by conducting an O/H join during which cct traffic can be visually acquired whilst manoeuvring in the O/H and following the procedure. Members agreed that the cause of the Airprox was that, in electing to fly a glide cct, the T67M pilot did not conform with the cct pattern formed by the C152 and descended into conflict with it on final approach.

Looking at the risk, the low-wing T67M was descending towards the high-wing C152 from above, a combination where the pilots' ability to see the other ac was degraded by the ac's wing configurations. That said, the radar reveals that there was ample opportunity for the T67M pilot to see the C152 ahead and below all the way around the cct until he was established on final approach.

It was only when both pilots broadcast their 'final' calls that it became apparent that something was amiss. The T67M pilot believed that the C152 was behind and continued his approach whilst the C152 pilot was concerned as he could not see the T67M ahead and was unable to scan for it above and behind. Fortunately the A/G Operator had seen the deteriorating situation and stepped-in on the frequency by alerting the T67M pilot to the C152 on final; Members commended the action taken by the A/G Operator who believed that only 50ft of separation pertained at the CPA. It was at this very late stage that the C152 appeared just ahead and about 100ft below to the T67M pilot who immediately executed a go-around and broadcast this on the RT. On hearing this transmission, the C152 pilot was satisfied that the situation had been resolved and elected to continue his approach. Members believed that luck had played a large part in the outcome as it was only at a very late stage that visual acquisition was made and action taken as the T67M descended on top of the C152. This fact alone was enough for the Board to conclude that an actual risk of collision existed during this Airprox.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The T67M pilot did not conform with the established cct pattern and descended into conflict with the C152 on final.

Degree of Risk: A.