

AIRPROX REPORT No 2011065

Date/Time: 30 Jun 2011 1325Z

Position: 5232N 00044E (4½nm SW of Watton)

Airspace: EGD 208 (Class: -)
Reporting Ac Reported Ac

Type: Extra 300 LPS SR20

Operator: Civ Comm Civ Pte

Alt/FL: 2500ft 2200ft
QNH (1025mb) QNH

Weather: VMC CLBC VMC In Rain

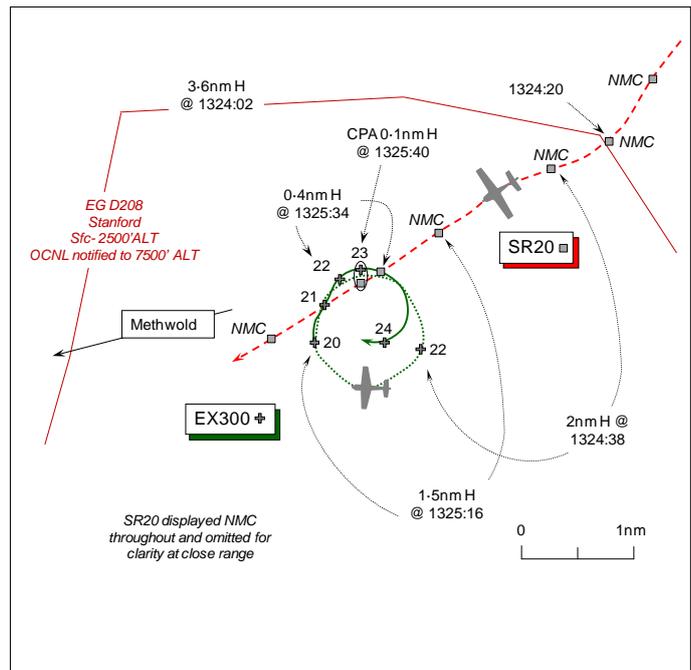
Visibility: 10km 6km

Reported Separation:

200ft V/nil H NR

Recorded Separation:

0.1nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE EXTRA 300 LPS (EX300) PILOT reports that he was participating in a Close Air Support task within EG D208 (STANTA) which was NOTAM'd from the surface to 17000ft, notifying other airspace users of rotary and fast-jet ac conducting high energy manoeuvres. Their range entry clearance had been issued by the Tactical Operations Cell (TOC), as the Exercise airspace coordination agency, on 136.950MHz. They were not in receipt of an ATS but had retained their assigned Lakenheath squawk prior to entry into D208 to facilitate deconfliction from traffic on recovery to Lakenheath. The exercise procedural deconfliction plan established safe separation between all exercise traffic with no change of altitude block permitted without prior approval from the TOC. Operating VFR in clear air 1000ft clear below cloud and a flight visibility of 10km, he was flying level at 2500ft Lakenheath QNH (1025mb) and had been allocated the block 1500-2500ft QNH to deconflict them from a Sea King operating below an altitude of 500ft and a Hawk operating above 3500ft. There were thunder cells seen 2nm to the N.

With full awareness of all other exercise airspace users he and his camera operator had sufficient confidence to dedicate their attention to the exercise ground activity, to the accepted detriment of lookout. The NOTAM and D208 boundary should have provided sanitised airspace, with TOC deconfliction allocating them ownership of the 1500-2500ft altitude block. Orbiting at 100kt, he thought to the L but actually in a R turn, in a holding pattern during their surveillance task, the other ac, a low-wing single-engine propeller driven aeroplane – the Cirrus SR20 - passed 200ft directly below his ac with a 'high' Risk of collision. No avoiding action was taken as the other ac was not seen until it was directly underneath and clearing away from his flight path. He opined that, as they had not seen the other ac approach and were manoeuvring constantly within their allocated altitude block, the 200ft vertical separation could have been eroded in fractions of a second and resulted in a collision.

The reported position of the Airprox is accurate as they were surveying a ground position at the time. He added that he was operating under a high workload, integrating with other rotary and fast-jet exercise traffic whilst supporting troops on the ground.

He immediately called Lakenheath to report the incident and asked if the other ac was on frequency and to be identified. At that point Lakenheath ATC had neither radio or radar contact with the other

ac so he switched back to the range frequency and completed the task. Upon completion of the mission he contacted Lakenheath ATC again 'on checkout' and was informed that the pilot of the other ac – the SR20 - had called Lakenheath and when questioned about the Airprox claimed he had deconflicted with his EX300 using TCAS. He (the EX300 pilot) informed Lakenheath he would be filing an Airprox and requested any radar tapes be retained.

Summarising the occurrence, the other ac – the SR20 - had entered a permanent Danger Area where there is frequently live firing, in the middle of a NOTAM'd exercise, with airspace between surface and 10000ft allocated to 3 different types of ac. All of those ac were flying unpredictable flight paths with high-energy manoeuvres involving rapid altitude changes through thousands of feet. If the pilot of the other ac thought it safe to enter such airspace (assuming they knew of its existence) then action is needed to prevent the future possibility of a very serious accident.

UKAB Note (1): The UK AIP at ENR 5-1-3-14-1 notifies EG D208 Stanford Danger Area as active for live firing/bombing/para dropping/demolition and unmanned ac operations, H24, from the sfc to ALT 2500ft and occasional use to ALT 7500ft. Statutory Instruments SI 1970/909 & SI 1975/24 apply. A Danger Area Activity Information Service (DAAIS) is available for D208 from Lakenheath ZONE on 128.90MHz.

UKAB Note (2): AUS originated a NOTAM for this close air support exercise (Pashtun Panther) (H1489/11 which replaced H1301/11) valid from 9 May to 8 Jul 2011 and effective Mon-Fri 0800-2200 UTC. It was specified that fast-jets and helicopters would conduct high-energy manoeuvres within a 5nm radius of 5230N 00044E [2nm S of the Airprox location] (EGD 208), from the surface to FL170. A landline PoC was also specified.

THE CIRRUS SR20 PILOT reports he had departed Old Buckenham VFR, bound for Waterford, Ireland. He included an original CAA VFR 1:500000 chart with his planned route marked, which was a NNW'ly track to overhead Shipdham, thence a WSW'ly track direct Northampton/Sywell, thereby circumnavigating to the N of EG D208 and passing to the S of the Marham MATZ.

A level cruise was established at an altitude of 2200ft at 135kt, whilst in receipt of a BS from London INFORMATION on 124.6MHz. Flying 1000ft clear below cloud with an in-flight visibility of 1600m in rain, he altered course onto a heading of 255° towards Methwold, to avoid Cumulonimbus cloud and heavy rain. The EX300 was not seen.

He opined that after departing Old Buckenham, a better choice might have been to call Marham RADAR on 124.15MHz rather than London INFORMATION. TCAS 1 is fitted with Mode S and a squawk was selected. His ac is white and red; the HISLS were on.

UKAB Note (3): In a subsequent telephone conversation with UKAB staff, the SR20 pilot advised he was not aware of the NOTAM'd close air support exercise or that EG D208 was active.

UKAB Note (4): The Debden Radar recording shows the SR20 crossing the lateral boundary of EG D208 at 1324:20 on a broadly SW'ly course, squawking A1177 (LAC FIS) although NMC is shown throughout. Nevertheless, the pilot reports his transit altitude as 2200ft thereby placing the ac within the regular upper limit of the Danger Area. The EX300 is shown orbiting R within the Danger Area and at 1324:38, is turning through S with the SR20 2nm to the NE. The EX300 continues in the R Turn through N on the next orbit [solid green line on the diagram] indicating 2000ft Mode C (1013mb) with the SR20 at a range of 1.5nm. Climbing slightly to 2200ft Mode C - about 2560ft ALT (1025mb), as the two ac close to a range of 0.4nm, the next sweep shows the CPA of 0.1nm H as the SR20, still indicating NMC and maintaining a steady course, passes marginally to the S of the EX300, the latter indicating 2300ft Mode C – about 2660ft ALT (1025mb).

UKAB Note (5): Subsequent to this Airprox, HQ 3AF helpfully provided a written analysis of the Lakenheath RAPCON ASR recording (it can only be played back in situ and no copies can be made), together with transcripts of the RT communications between Lakenheath RAPCON and both ac after the Airprox had occurred.

Analysis of the recorded Lakenheath RAPCON ASR data by the facility staff reveals that the SR20 was initially observed 2nm W of Old Buckenham A/D climbing through 1000ft ALT Mode C (their Mode C is related to QNH below their TA of 4000ft) on a NW'ly heading, squawking A1177. At 1320, the SR20 was heading to Shipdham, before turning to the SW, apparently to deconflict from a 'precipitation cell'. At the same time the SR20's Mode C readout ceased and was no longer shown, the last Mode C readout indicating 2000ft ALT Mode C. At 1325:40, the primary contacts of the EX300 and the SR20 merge with the former indicating 2600ft ALT and the SR20 with no Mode C. The EX300 was observed in D208 during the entire incident in a right-hand orbit between 2300ft and 2700ft ALT Mode C, squawking A0457. During the remainder of the recording the EX300 continues the orbit in D208 as the SR20 continues enroute to the W then NW.

At 1326:15, some 35 sec after the CPA, the EX300 pilot called RAPCON on 136.5MHz, "*Lakenheath [EX300 C/S] we are um still in Delta 2-0-8, we just had a G-A entalope [sic – more probably interloper] come right through the range fairly close aboard with us, just wondering if they're speaking to you.*" After RAPCON instructed the EX300 pilot to squawk IDENT the pilot advised the unknown ac was, "*...now West of our position approximately 1 mile.*" RAPCON replied, "*[EX300 C/S] roger...I'm not talking to the aircraft at all..you're radar contact and I didn't even know you were in STANTA range.*" At 1326:47, the EX300 pilot advised, "*...copied, we're maintaining your squawk 0-4-5-7 but we're a single box so we're speaking to range frequency. If that aircraft calls up would you..be kind enough to get a trace or callsign and I'll give you a call on the landline*", to which RAPCON agreed prior to the EX300 pilot switching back to the range frequency.

Some 9min after the CPA, at 1334:30, the SR20 pilot called Lakenheath on 124.9MHz. Subsequent to a radio check request from RAPCON, the SR20 pilot replied, "*not so bad thank you Sir uh trying to dodge the showers*". RAPCON advised the SR20 pilot, "*..just be advised you flew through..STANTA Delta 2-0-8, and there is numerous aircraft in there did you see...PA 31 [actually referring to the EX300] or something like that almost hit you*". The SR20 pilot replied "*Yea I had him on TCAS but eh but there was no uh no conflict.*" RAPCON added, "*Roger apparently he thought that you got closer he contacted me on my frequency to let me know and I guess he is going to call up*". Subsequently, the SR20 pilot reported, "*Yes sir well now..gonna intercept the track to..Echo Golf Bravo Kilo [Northampton/Sywell]*", whereupon RAPCON asked for the ac's altitude, to which the SR20 pilot replied at 1335:18, "*altitude is..2 thousand feet on 1-0-2-4.*"

HQ 3AF comments that it is hard to understand, given the weather conditions and his intended route, why the SR20 pilot chose to contact London INFORMATION rather than speak to either Marham APPROACH or Lakenheath RAPCON, either of which unit could have prevented him from blundering into an active danger area. TCAS may have given him a warning on this occasion but he should aware that live weapons are not equipped with transponders.

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 video recordings and reports from the appropriate ATSU and Command.

The Board was briefed on the planned route of the SR20 circumnavigating to the N of EG D208. It was evident, however, that after departing Old Buckenham the SR20 pilot had deviated from his planned route to avoid cumulonimbus cloud and heavy rain, culminating in the ac flying through this permanently active Danger Area. A pilot Member opined that this was disappointing when flying a modern ac with reputedly good navigational displays. The analysis by Lakenheath ATC reveals that the SR20 pilot had set course for Shipdham before turning to the SW, apparently to avoid a 'precipitation cell' shown on the Lakenheath RAPCON ASR recording. Having elected to route around this weather by turning westerly via Methwold, this took the SR20 straight through the exercise within D208. Controller Members suggested the SR20 pilot would have been better advised to have called Lakenheath ATC who offers the DAAIS for D208 or possibly Marham ATC. Both

ATSUs could potentially have provided radar assistance to the SR20 pilot; in addition to augmenting his visual lookout scan they would in all probability have forewarned him of the status and activity within D208. At a reported transit altitude of 2200ft, the LAC radar recording revealed that the SR20 pilot entered D208, thereby placing his ac in conflict with the EX300 participating in the close air support exercise within the Danger Area and for which a NOTAM had been issued notifying other airspace users that fast-jets and helicopters would conduct high-energy manoeuvres within a 5nm radius of the specified co-ordinates up to FL170. Members noted that the SR20 pilot reports he was unaware of the NOTAM or that D208 was active, which was indicative of inadequate pre-flight planning and awareness of the airspace surrounding his track. Members concluded unanimously that this Airprox had resulted because the SR20 pilot flew through a promulgated and active Danger Area and into conflict with the EX300.

It was reported that the EX300 pilot and his cameraman were focusing on their airborne surveillance task when the Airprox occurred and the SR20 flew about 200ft below their ac. That sighting was the first indication they had of any non-exercise ac within D208. Without Mode C from the SR20 the actual vertical separation that pertained could not be ascertained independently and the importance of ensuring that altitude reporting was always selected when the transponder is on was stressed by controller Members. The EX300's indicated Mode C was 2200-2300ft Mode C at the moment the SR20 under flew, equating to an altitude between 2560-2660ft QNH (1025mb), which suggests the EX300 was about 360ft above the SR20's reported 2200ft ALT. Given the tolerances applicable to Mode C of +/- 200ft, this was in general accord with the EX300 pilot's reported separation. The Lakenheath RAPCON RT transcript reveals that the SR20 pilot was aware of the EX300 from his TCAS I, which should also have given an indication of the EX300's relative vertical separation above his ac, but the SR20 pilot did not acquire it visually or take any action to avoid it. Furthermore, he would not know it was orbiting and the azimuth indications of TCAS I devices can be deceptive in such scenarios. The EX300 pilot was unable to take any avoiding action as the SR20 was not seen until it was directly underneath, so neither pilot took any action to avert this close quarters encounter, suggesting to some Members that an actual Risk existed. Other Members contended that with no less than 200ft of vertical separation reported by the EX300 pilot and somewhat more than that apparent from his ac's Mode C indication, the vertical separation was sufficient to avert an actual collision. Following a comprehensive debate, the Board concluded that the safety of the ac involved had been compromised.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The SR20 pilot flew through a promulgated and active Danger Area and into conflict with the EX300.

Degree of Risk: B.