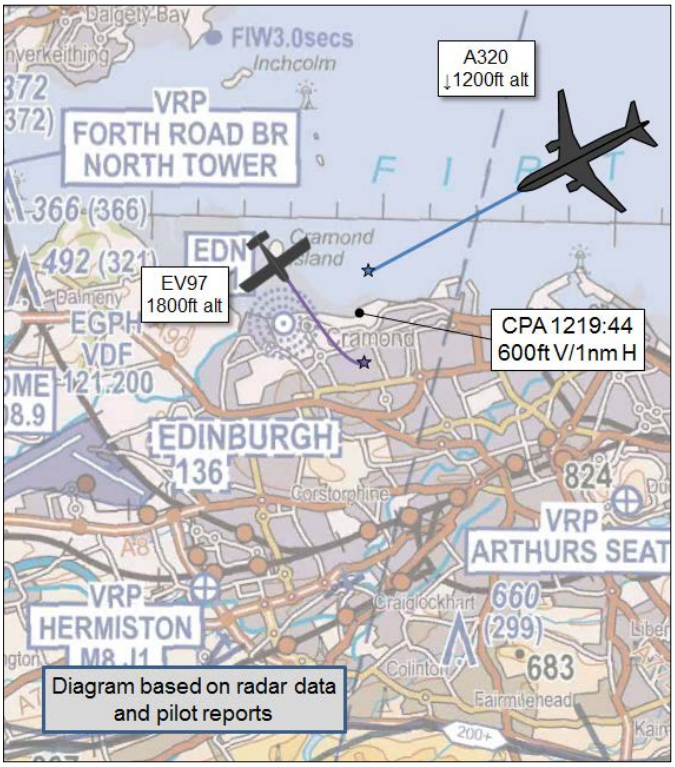
AIRPROX REPORT No 2017166

Date: 12 Jul 2017 Time: 1200Z Position: 5558N 00315W Location: Edinburgh

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A320	EV97
Operator	CAT	Civ Pte
Airspace	Edinburgh CTR	
Class	D	D
Rules	IFR	VFR
Service	Aerodrome	Aerodrome
Provider	Edinburgh	Edinburgh
Altitude/FL	1200ft	1800ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Company	Silver, Blue
Lighting	Strobes, Nav, Landing	
Conditions	VMC	VMC
Visibility	>10km	10km
Altitude/FL	2000ft	
Altimeter	QNH (1018hPa)	NK
Heading	242°	South east
Speed	170kt	Not known
ACAS/TAS	TCAS II	Not fitted
Alert	TA	N/A
Separation		
Reported	500 ft V/1nm H	
Recorded	600ft V/1nm H	



THE A320 PILOT reports that whilst on an approach to land at Edinburgh, the Tower controller informed them of a light aircraft crossing ahead. The navigation display had the TCAS target displayed in front of them and the Captain asked the PM to look for the aircraft out of the window. Initially they could not see it, the TCAS was showing it directly in front with less than 2nm separation at the same level. As they were considering a go-around, the PM spotted a microlight in front of them, it had already crossed their path. The TCAS issued a 'Traffic, Traffic' warning and again the Captain considered a go-around, but the traffic was now above them and 1nm away, so the approach was continued. He noted that it increased their workload considerably during a critical phase of flight. He was surprised that the controller had allowed the aircraft to cross that close, without first checking that they were visual.

He assessed the risk of collision as 'Medium'.

THE EV97 PILOT reports that he was unaware of the incident until notified by the UKAB. He was operating under the instruction of Edinburgh ATC and doesn't remember anything unusual. He did not see the A320.

He assessed the risk of collision as 'None'.

Factual Background

The weather at Edinburgh was recorded as follows:

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EGPH 121150Z VRB03KT 9999 SCT024 17/11 Q1018=
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Analysis and Investigation

CAA ATSI

ATSI had access to reports from the pilots of the A320 and EV97 and the local ATC unit investigation report. The local area radar data and the unit radio recordings were also reviewed. Screenshots produced in this report are provided using recordings of the Area Radar. Levels indicated are in altitude. All times UTC.

At 1202:10, the EV97 pilot made a request to the Edinburgh Approach controller to transit from the Power Station to Musselburgh Racecourse. The Approach controller issued a clearance to transit the CTR via Longannet, to the bridges, and via the airfield overhead to Musselburgh, not above altitude 2000ft VFR QNH 1018 hPa. The EV97 pilot replied with an incomplete read back. This was challenged by the approach controller and a full and accurate read back was provided by the pilot. The Approach controller then coordinated the EV97 transit with the Tower (AIR) controller and the EV97 was transferred to the AIR controller on reaching Longannet.

At 1209:10, the EV97 pilot checked in on the AIR frequency and the AIR controller instructed him to report at the bridges. The pilot provided an accurate read back. At 1216:10, he reported at the bridges and was displayed on the radar replay proceeding eastbound along the Forth (Figure 1). The AIR controller instructed the EV97 to continue towards the airfield with a clearance limit of the northern aerodrome boundary. The controller advised that there was an SF34 on 6 mile final for RW24 and requested that the EV97 pilot report that traffic in sight. The EV97 pilot responded and said he would keep visual. The controller responded with a request to confirm when traffic was in sight and advised that it was now 5nm final. The EV97 pilot replied that he would report traffic in sight. At this time the radar replay displayed a steady stream of inbound IFR aircraft for RW24, with the SF34 No1 and the A320, who subsequently reported the Airprox, No2 for the approach.

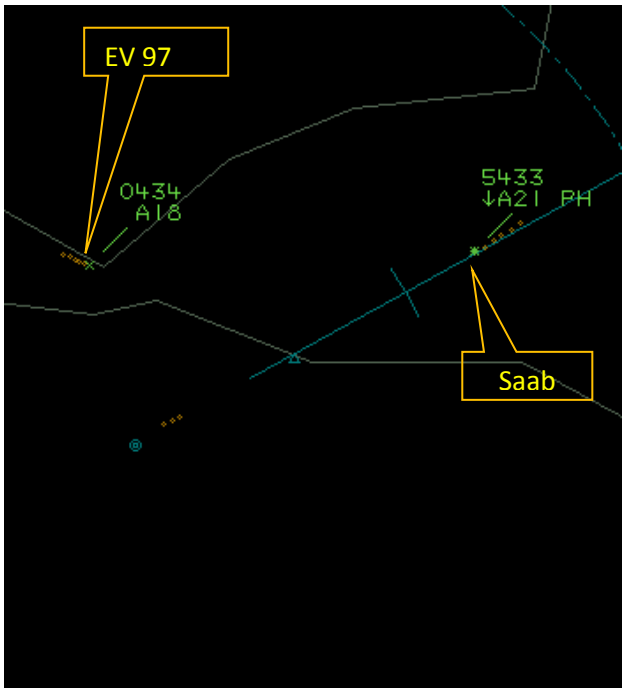

Figure 1 - 1216:10

At 1216:40, the SF34 pilot checked in with the AIR controller and was given Traffic Information on the EV97, the controller advised them that the EV97 would pass behind them, and the SF34 pilot acknowledged. The radar replay displayed the EV97 continuing eastbound despite having been instructed to continue towards the airfield, and the controller asked the EV97 pilot if he had the SF34 in sight; the pilot confirmed that he had. The controller then instructed the EV97 pilot to pass

above and behind the SF34. The pilot confirmed that he would, and the controller advised the SF34 pilot of this.

At 1217:40, the radar replay displayed the EV97 slightly north of the final approach track at 2.5nm still tracking eastbound (Figure 2). The AIR controller advised the EV97 pilot that there was an A320 just turning onto an 8 mile final, (unfortunately there is a gap in the R/T recording and the response from the pilot is not captured). The Edinburgh unit investigation report states that the controller went on to say *"for RW24"* and the EV97 pilot responded with *"roger that".*

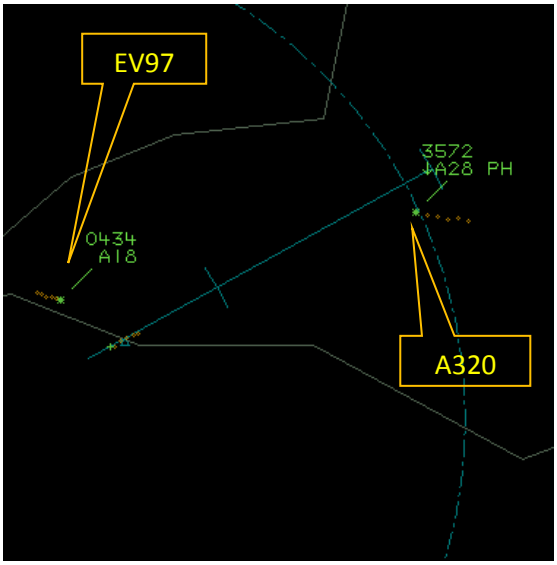

Figure 2 - 1217:40

At 1218:00, the AIR controller instructed the EV97 to track south easterly to clear the extended centreline. The pilot acknowledged the instruction. At 1218:20, the A320 pilot checked in with the AIR controller at 8nm final and the controller instructed him to continue approach RW24, advised that they were just becoming No1, and passed Traffic Information as 'right to left about a 3 mile final, a microlight, not above altitude 2000ft VFR'. The A320 pilot acknowledged the Traffic Information. At this time the EV97 was displayed on the radar replay north abeam the final approach track at 3nm and still tracking eastbound (Figure 3).

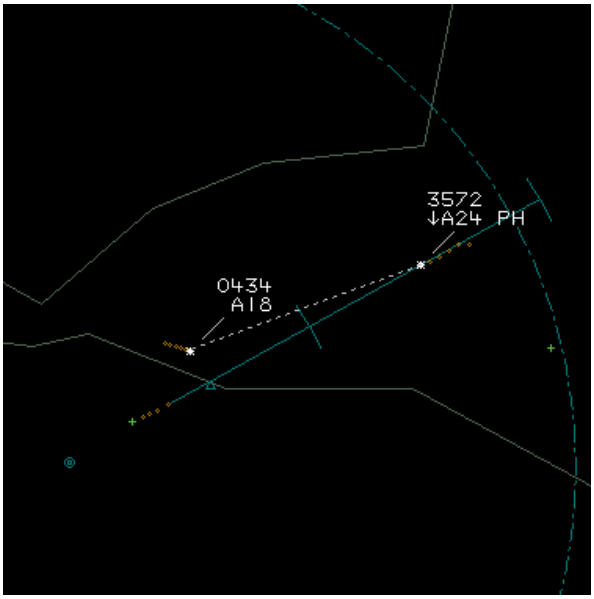

Figure 3 - 1218:20

At 1218:52, the EV97 crossed the final approach track at 3nm final, with the A320 at 6nm final. The A320 altitude indicated 1900ft and the EV97, 1800ft (Figure 4).

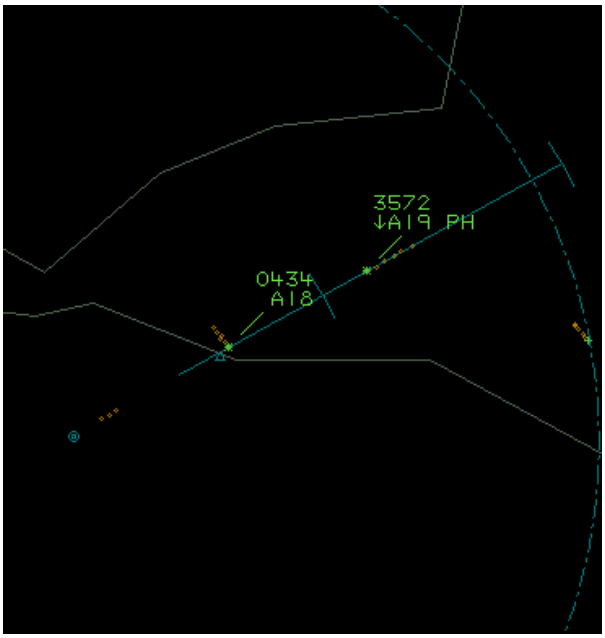

Figure 4 - 1218:52

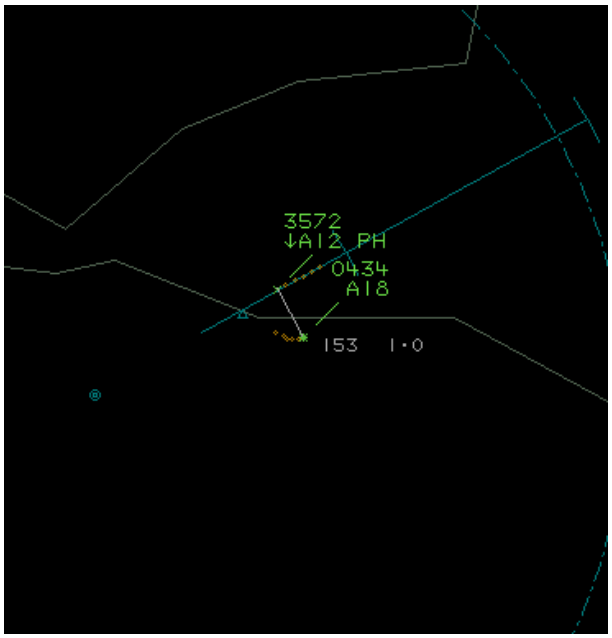

Figure 5 - 1219:44

At 1219:02, the EV97 pilot reported that he had cleared the final approach track and the controller responded with an instruction to route direct to Musselburgh. The EV97 pilot did not respond but was observed on the radar replay to turn to the east. CPA occurred at 1219:44 (Figure 5), where there was 1nm laterally and 600ft vertically between the two aircraft.

After landing, the A320 pilot advised the AIR controller that they had received a TCAS TA. The pilot's Airprox report stated that on having received a TA warning there was a target displayed that was consistent with the Traffic Information passed by the AIR controller. However, they did not become visual with the EV97 until it had cleared the final approach track and was passing down their left- hand side.

The Edinburgh AIR controller was providing an Aerodrome Control Service in Class D airspace. Within Class D Airspace there is no requirement to separate VFR and IFR aircraft. In accordance with CAP 493 Section 1, controllers are required to pass Traffic Information to aircraft operating IFR on VFR traffic, and to pass Traffic Information to aircraft operating VFR on IFR traffic, and in both circumstances provide avoidance advice if requested. The controller discharged these responsibilities, no avoidance advice was requested. The controller was visual with both aircraft throughout the time period and took positive action on two occasions in an attempt to achieve an expeditious crossing of the final approach track by the EV97. Radar replay analysis of the EV97 track during the occurrence revealed that the aircraft did not adhere to his cleared route and did not act upon the instructions from the controller on two occasions and this resulted in a delayed crossing.

UKAB Secretariat

The A320 and EV97 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1].

Summary

An Airprox was reported when an A320 and an EV97 flew into proximity in Edinburgh's Class D airspace at 1200 on Wednesday 12th July 2017. The A320 pilot was operating under IFR in VMC, and in receipt of an Aerodrome Control Service, the EV97 pilot was VFR in VMC and also in receipt of a Aerodrome Service from Edinburgh.

[1] SERA.3205 Proximity.

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, reports from the air traffic controllers involved and reports from the appropriate ATC operating authorities.

The Board first looked at the actions of the A320 pilot. He could see on his TCAS that an aircraft was ahead of him, and had received Traffic information from ATC that the EV97 was crossing the approach lane, but he was understandably concerned because he couldn't see the EV97 visually. The TCAS had given a Traffic Alert, but did not upgrade to a Resolution Advisory because there was sufficient distance between the two aircraft. Members noted that in Class D airspace it was very common to have aircraft routing through the airspace under VFR, and that there were no minimum separation standards to adhere to because the VFR traffic would be expected to visually deconflict with the IFR traffic. Some members opined that CAT pilots did not always seem to be aware of this, and that, if he was concerned, the A320 pilot could have asked ATC for an updated position of the crossing aircraft. They also noted that TCAS warnings could quite easily be generated in the mixed VFR/IFR environment of Class D airspace even when visual deconfliction had been achieved.

For his part, the EV97 pilot had initially been cleared to route via the overhead and then subsequently to cross through the approach lane between two IFR aircraft. Members noted that he didn't initially readback his clearance correctly and needed to be corrected by the controller. Furthermore, on crossing the approach lane he had needed to be reminded to keep on track before being told to cross via Musselburgh in order to use the most expeditious routing. Members commented that, on penetrating controlled airspace it was incumbent on the pilots to follow ATC instructions to the letter, by not doing so, he increased the controller's workload not only by requiring reminders to be made to him, but also in passing information to the IFR traffic.

Turning to ATC, the Board agreed that they were trying to allow everyone to do as they requested whilst keeping IFR traffic flowing and allowing VFR tracks to cross their airspace. Notwithstanding, some controlling members thought the AIR controller should have taken positive control of the situation earlier by telling the EV97 pilot to turn across the approach lane when he first noticed he was still routing eastbound. Others noted that the controller was clearly busy, and thought that the onus lay on the EV97 pilot to be held responsible for following ATC's routing instructions.

In determining the cause of the Airprox, some Board members wondered whether this was simply a TCAS sighting report caused by the A320 pilot's concern because he couldn't initially see the EV97. However, other members thought that such a cause statement didn't properly encapsulate the concern felt by the A320 pilot. After some debate, it was agreed that the incident was best described as the A320 pilot being concerned by the proximity of the EV97. Notwithstanding, and although the EV97 pilot had reported that he had not seen the A320, it was judged that normal safety standards and procedures had pertained. Accordingly, the risk was assessed as a non-proximate occurrence; risk Category E.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The A320 pilot was concerned by the proximity of the EV97.

Degree of Risk: E.

Safety Barrier Assessment[2]

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

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

ANSP

Regulations, Processes, Procedures & Compliance was assessed as **fully effective**; all the appropriate procedures were adhered to.

Flight Crew

Regulations, Processes, Procedures, Instructions & Compliance was assessed as **partially effective** because the EV97 pilot only partially complied with ATC instructions.

Warning System Operation and Compliance was assessed as **partially effective** because the EV97 did not have a CWS.

See and Avoid was assessed as **fully effective** because the A320 pilot had seen the EV97 in enough time to judge that a go-around was not required.