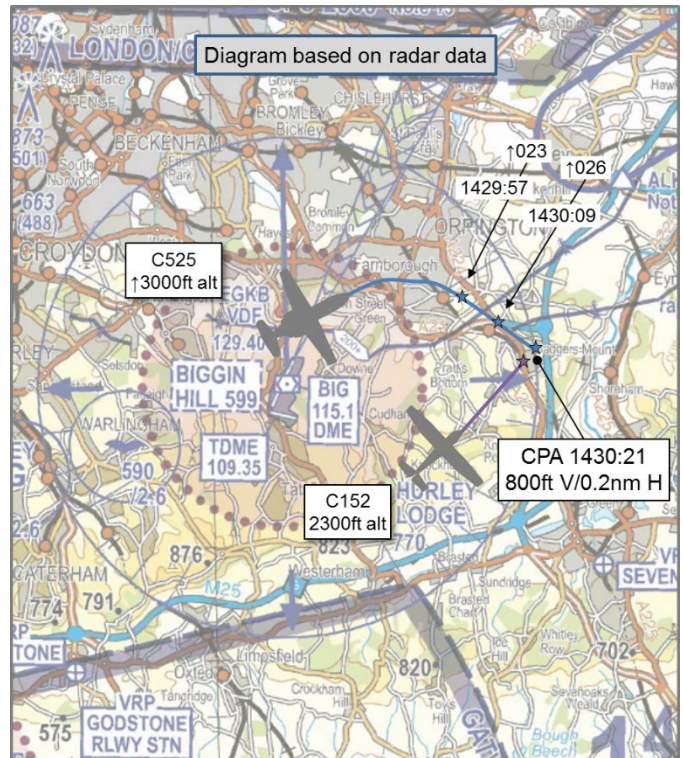


AIRPROX REPORT No 2018018

Date: 30 Jan 2018 Time: 1430Z Position: 5119N 00008E Location: Biggin Hill

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C525	C152
Operator	Civ Pte	Civ Pte
Airspace	London TMA	London FIR
Class	A	G
Rules	IFR	VFR
Service	Radar Control	Basic
Provider	Thames Radar	Biggin Hill
Altitude/FL	3000ft	2300ft
Transponder	A, C, S	A, C
Reported		
Colours	Blue, Red	
Lighting	Strobes, Nav, Beacon	
Conditions	IMC	VMC
Visibility	10km	
Altitude/FL	2400ft	
Altimeter	QNH (1026hPa)	
Heading	120°	
Speed	220kt	
ACAS/TAS	TCAS I	
Alert	TA	
Separation		
Reported	300ft V/1nm H	NK
Recorded	800ft V/0.2nm H	



THE THAMES RADAR CONTROLLER reports that the C525 departing from Biggin Hill was released by the outgoing Thames Radar controller. Biggin Hill subsequently transferred the C525 to him as it was passing 2100ft climbing to 3000ft, under own navigation, which was a right turn. When the pilot first called on frequency he told him to squawk ident and, at that point, he noticed a 7047 squawk at 2300ft tracking northbound about 3nm east of Biggin Hill. He initially passed Traffic Information to the C525 pilot but, because he was not formally identified, no service was given. Shortly afterwards he felt that the proximity of the two aircraft was unsafe so he issued an avoiding-action climb to 4000ft. Once the C525 had entered controlled airspace, he told him he was under a Radar Control Service and clear of conflict because he was now 500ft above the unknown traffic.

THE C525 PILOT reports that he had departed from Biggin Hill and was just about to level off at 2400ft when Thames Radar asked him to squawk ident, climb to 3000ft (he recalled, although it could have been 4000ft), turn onto heading 100° and that there was traffic ahead, altitude unknown. At that time he was just below cloud in front of him, the cloudbase was about 2400ft, and he could not see any traffic, although the TCAS was showing traffic in front of them which appeared to be moving to the right. Seconds later, whilst already in the climb and entering the cloud at 2800ft, he received a yellow target in TCAS about 1nm to the right and 300ft below and the 'TRAFFIC, TRAFFIC' audio warning occurred. He was already in a slight left-turn and climbing away from the target so no further avoiding action was needed. He opined that there was obviously some traffic moving from north-to-south [in fact south-to-north] to the east of Biggin Hill and his initial clearance from RW03 of 'Clacton 2 departure, right turn 1 mile inbound DET, climb altitude 2400ft' led him almost directly to that traffic. He thought it would have been beneficial to have delayed his take-off clearance by 30secs to 1 min until the slower traffic had cleared.

He assessed the risk of collision as 'Medium'.

THE C152 PILOT chose not to file a report.

THE BIGGIN CONTROLLER reports that the active runway at the time was RW21; however, the C525 pilot had requested to depart from RW03. The C525 pilot reported ready for departure and was told to hold due to traffic on left-base. After this traffic had landed, the ATM was checked for possible conflict, and a 7047 squawk was observed SE of the airport. This traffic was believed to be the C152 that had departed from RW21 some minutes earlier. The controller believed that there was enough time to get the C525 airborne because he thought that the speed differential was such that the C525 would be well ahead. Once the C525 was airborne and established in the right turn to Detling, he instructed the pilot to continue the climb to 3000ft as per the release from Thames Radar. This was correctly read back and he sent the C525 across to the Thames Radar frequency anticipating that it would be well above and ahead of the C152.

Factual Background

The weather at Biggin Hill was recorded as follows:

EGKB 301420Z 19008KT 160V220 9999 SCT030 07/04 Q1025=

Analysis and Investigation

CAA ATSI

At 1422:55 the C152 was cleared for take-off from Biggin Hill RW21 with a left hand turn out. At 1428:00 the C525 was cleared for take-off from Biggin Hill RW03 with a right hand turn out.

The C525 was first visible on radar at 1428:59 (Figure 1).

The C525 pilot called the Thames controller at 1429:40 (Figure 2), reporting that the aircraft had departed from Biggin Hill and was leaving an altitude of 2000ft climbing to an altitude of 3000ft.

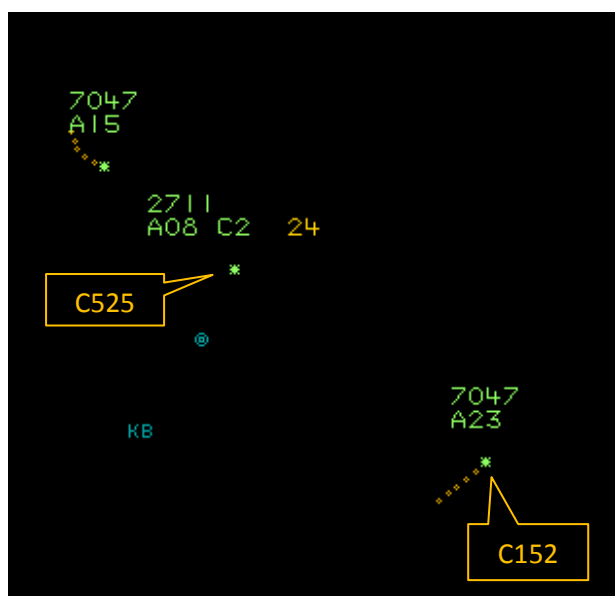


Figure 1 – 1428:59

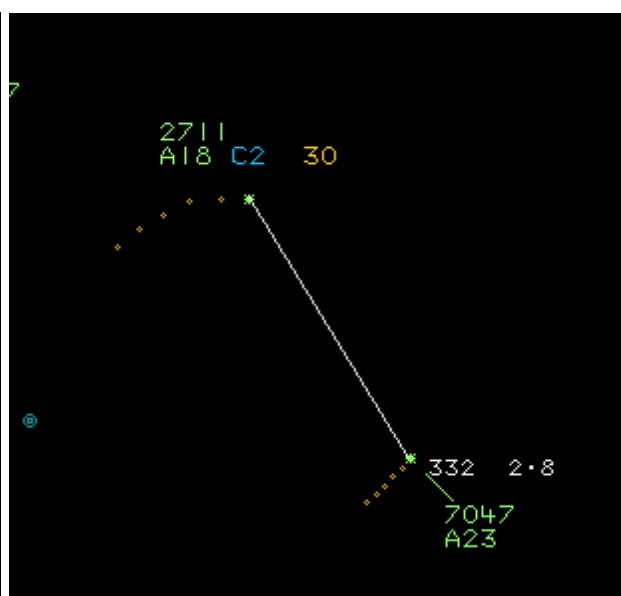


Figure 2 – 1429:40

The controller instructed the C525 pilot to squawk ident at 1429:50 (Figure 3) and passed Traffic Information on the C152.

At 1429:59 (Figure 4) the C525 pilot reported that they had the C152 visible on TCAS. As soon as this transmission was finished, the controller issued an avoiding action climb to an altitude of 4000ft.

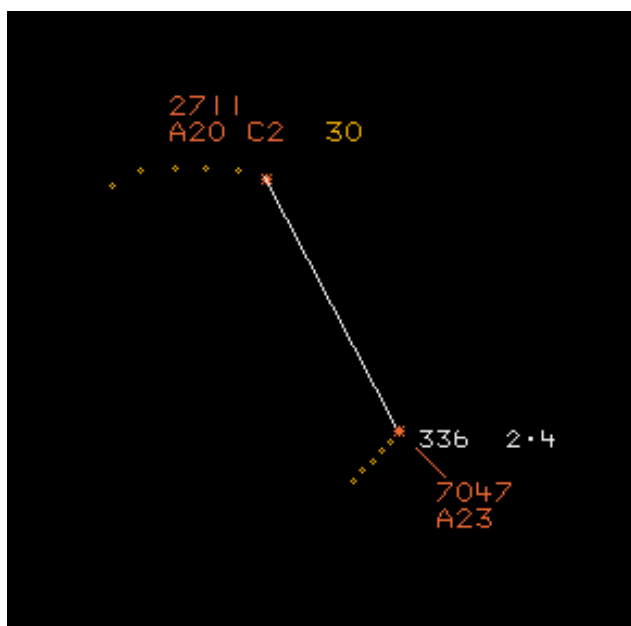


Figure 3 – 1429:50

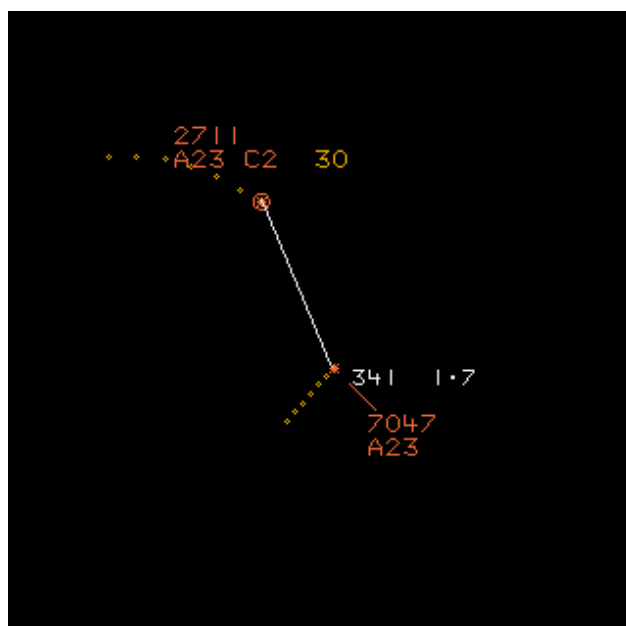


Figure 4 – 1429:59

At 1430:15 (Figure 5) the controller informed the C525 pilot that they were now inside controlled airspace and the aircraft was 600ft below them. CPA occurred at 1430:24 (Figure 6) with an indicated 800ft and 0.2nm between the two aircraft.

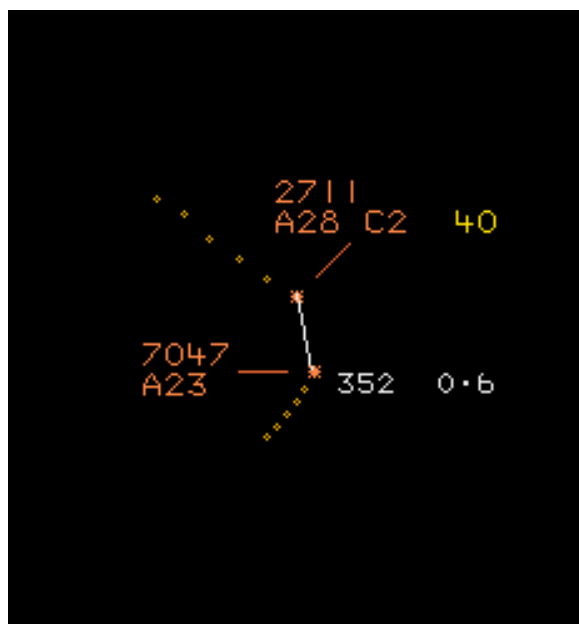


Figure 5 – 1430:15

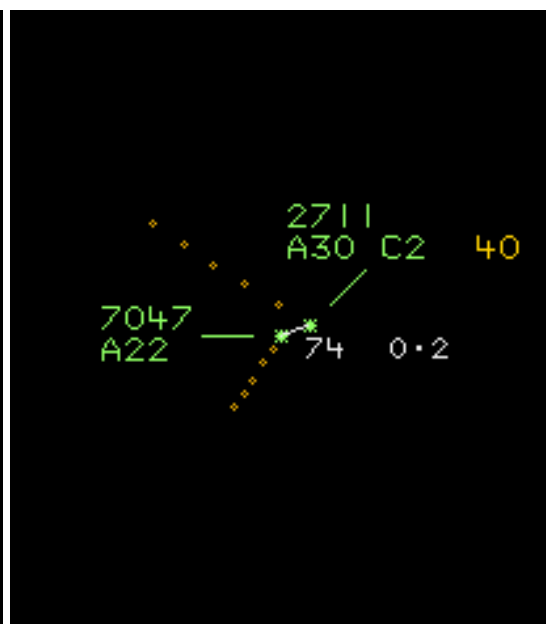


Figure 6 – 1430:24

Prior to CPA the C525 pilot had not agreed a service with the controller and was operating in Class G airspace. The C152 pilot was receiving a Basic Service from Biggin Hill Approach and operating in Class G airspace. Traffic Information was given to the C525 pilot, promptly followed by avoiding action.

CAP 493 states:

“Surveillance systems may also be used to provide the following, whether or not the aircraft has been identified:

- (1) Information on the position of aircraft likely to constitute a hazard;*
- (2) Avoiding action;*
- (3) Information about observed weather for pilots and other controllers; and*
- (4) Assistance to aircraft in emergency. “*

It also states:

“Regardless of the type of airspace, or the air traffic service being provided, nothing shall prevent a controller from taking action he considers appropriate if he believes a risk of collision exists.”

UKAB Secretariat

The C525 and C152 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹, notwithstanding that ATC are required to separate IFR traffic in CAS.

Summary

An Airprox was reported when a C525 and a C152 flew into proximity near Biggin Hill at 1430 on Tuesday 30th January 2018. The C525 pilot was operating under IFR in IMC, and in receipt of a Radar Control Service from Thames Radar, the C152 pilot was in receipt of a Basic Service from Biggin Hill.

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 and operating authorities.

The Board first looked at the actions of the C525 pilot. Noting that he had elected to depart from RW03 against the normal flow of other traffic, members wondered why he had done so and whether this may have meant that ATC did not fully assimilate the potential for a conflict with the C152. Some members speculated that the taxi route may have been shorter, or that because he was intending to head east it was an easier climbing departure; however, ultimately, he was entitled to ask for such a departure and it was for ATC to decide whether there was anything to affect or not. Once airborne the C525 pilot was climbing in accordance with his clearance, and the radar pictures accorded with his recollection that he was given a stop-off initially of 2400ft, with further climb approved once airborne. Without Traffic Information from ATC, the C525 pilot had no way of knowing that the C152 was there until it appeared on his TCAS. Thereafter, on switching to the Thames Radar frequency, he acted in accordance with their instructions for an avoiding-action climb, and the Board thought there was very little else he could have done in the circumstances.

Turning to the C152 pilot, the Board were very disappointed that he had chosen not to submit a report; the purpose of the Airprox process is solely to identify any lessons that can be learnt from such events in order to stop more serious ones occurring; without the C152 pilot's information, the assessment process was missing a vital perspective. However, in this instance, with a transcript of the Biggin frequency available, the Board could see that he was receiving a Basic Service from Biggin, did not receive any Traffic Information on the C525, and that there was little the C152 pilot could have done to avoid the Airprox. The Board did not know whether the C152 pilot could see the C525 climbing out, whether he had a CWS providing him with situational awareness, or whether he was concerned by the encounter at all; from his lack of a report, the Board assumed he was either not aware or was not concerned.

¹ SERA.3205 Proximity.

For his part, the Thames Radar controller had reported the Airprox and had clearly been concerned by the proximity of the two aircraft when the C525 came across to him from Biggin Hill. He would not have expected the aircraft to be passed to him in conflict, and when the C525 pilot first called on his frequency he was in a right turn and there was already only 2.8nm separation between the two aircraft. The controller was obviously uncomfortable with the separation, and controller members noted that the C525 climbed through the level of the C152 with 1.8nm separation at the same time that he identified it. They further noted that the controller then did the only thing realistically available to him and gave the C525 pilot an avoiding-action climb in order to get it into controlled airspace as quickly as possible. Some members wondered whether the C525 could have been released for a continuous climb to 3000ft in the first instance to stop the pilot slowing down as he approached 2400ft, ready to level off. But controllers who were used to working in the airspace informed them that London City departures usually prevented such a clearance; the controller would be looking to climb any aircraft out of Biggin Hill as quickly as possible and would return to update the clearance when able.

The Board then recalled that they had seen similar Airprox from Biggin Hill in the recent past; in 2017024 Biggin ATC were found to have caused the Airprox by releasing an aircraft into conflict, and in 2017169 Biggin ATC were criticised for sending an Aircraft over to Thames Radar in conflict. Whilst acknowledging that they don't have any radar, controller members commented that they did have an ATM radar repeater that the Biggin Controller could have used more effectively to alleviate the circumstances around this particular event. The only person with full situational awareness in this incident was the Biggin Controller who was providing a service to both aircraft. Controller members opined that the Biggin Controller should therefore have taken into account the likely conflict and ideally have given Traffic Information to both pilots. With hindsight, a better option may have been to hold the C525 prior to departure, although the Board acknowledged that the controller had reported looking at the geometry of the two aircraft and assessing that the C525 would out-climb the C152. In the event, this didn't happen and, notwithstanding he wanted to get the aircraft passed to Thames Radar as quickly as possible, members thought that he should have recognised the unfolding situation and should not have sent the C525 to Thames Radar in conflict. Some members wondered whether he could have given Traffic Information to the Thames controller, given that he knew (or could find out) the intentions of the C152 pilot; however, it was acknowledged that Thames controllers were very busy and this wouldn't have been as straightforward as it appeared.

In determining the cause of the Airprox the Board quickly agreed that Biggin ATC were the agency with most situational awareness and were in a position to have influenced events by delaying the C525s departure. The Board therefore agreed that Biggin Hill ATC had allowed the C525 to depart into conflict with the C152. However, given the achieved separation and the fact that the C525 was in controlled airspace and therefore deemed separated from the external VFR traffic as the aircraft came into proximity, they assessed the risk to be Category C, no risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Biggin controller allowed the C525 to depart into conflict with the C152.

Degree of Risk: C.

Safety Barrier Assessment²

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:

Situational Awareness and Action were assessed as **partially effective** because Biggin Hill ATC did not assimilate the conflict and did not pass Traffic Information to either aircraft, but Thames Radar did assimilate the conflict and resolved it by giving the C525 an avoiding-action climb into CAS.

Flight Crew:

See and Avoid were assessed as **not used** because the C525 was in cloud.

