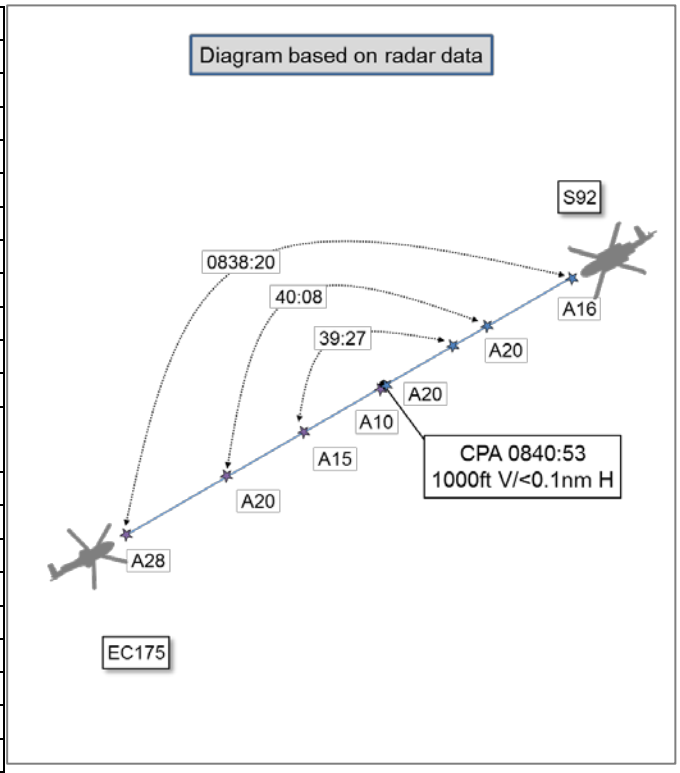
AIRPROX REPORT No 2017006

Date: 06 Jan 2017 Time: 0839Z Position: 5744N 00046E Location: 95nm NE Aberdeen

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	S92	EC175
Operator	Civ Comm	Civ Comm
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	IFR	IFR
Service	Offshore Traffic	Offshore Traffic
Provider	Aberdeen	Aberdeen
Altitude/FL	2000ft	1000ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Company	Yellow
Lighting	Position, anti-coll, landing, HISL	Red/white strobes, nav
Conditions	IMC	IMC
Visibility	In cloud	In cloud
Altitude/FL	2000ft	1100ft
Altimeter	QNH	QNH (1022hPa)
Heading	'southwest'	067°
Speed	120kt	142kt
ACAS/TAS	TCAS II	TCAS I
Alert	TA	TA
Separation		
Reported	400ft V/0m H	1000ft V/0m H
Recorded	1000ft V/<0.1nm H	



THE SIKORSKY S92 PILOT reports that whilst on the Britannia platform deck they were advised on 'log frequency' of the EC175 outbound to Alba, ETA 0844. They lifted at 0833 and climbed to 1000ft but at this stage they had not heard the EC175 on the Alba/Britannia frequency. They gave radar a position report and requested a climb to 2000ft; with no traffic to affect they started their climb. Whilst in the climb (IMC) they heard the EC175 pilot request a descent from radar. The EC175 pilot was informed of their position and that they were in the climb from 1000-2000ft, 12 o'clock, 18nm. Radar asked the EC175 pilot his intentions; he said they would descend 'expeditiously'. Radar then told them about the EC175, and that it was descending. At this stage they could not see the EC175 on TCAS. When 4nm apart (opposite direction), the EC175 appeared on their TCAS and appeared to be below them. Soon after this they received a TA as the EC175 passed 400ft below them.

He assessed the risk of collision as 'Low'.

THE EUROCOPTER EC175 PILOT reports that on the way to the Alba North platform they were aware of the S92 on the Britannia platform going back to Aberdeen. They were at 3000ft, requesting descent to 500ft. Due to busy traffic, it took a long time before ATC cleared them to descend, advising them about the opposite traffic climbing to 2000ft. ATC asked their intentions and they responded that they would descend expeditiously to be clear of the opposite traffic. Despite being in IMC they had a good situational awareness with a good TCAS return. They were descending through 1100ft to 500ft at 750fpm when they had a TA. At this time the traffic was 900ft above them level at 2000ft. A few seconds later the TA disappeared. They continued the approach without any further problems. Once on the deck, the S92 pilot contacted them to let them know they would report the incident. They estimated that when they crossed the level of the S92, it was at least 4nm in front.

He assessed the risk of collision as 'None'.

THE ABERDEEN REBROS CONTROLLER reports that on returning from 2 weeks leave he was informed that an Airprox report had been filed during a time that he was plugged in on the sector. Due to the length of time between the alleged incident and when he was informed of the event, he was shown the radar recording and listened to the RT to aid his memory. Both at the time and having gone over it again, he believed that full Traffic Information had been given to both pilots and that nothing out of the ordinary had occurred.

Factual Background

The weather at Aberdeen was recorded as follows:

```
EGPD 060820Z 19008KT 140V240 CAVOK 05/04 Q1023 NOSIG
```

Analysis and Investigation

CAA ATSI

At 0835:20 the EC175 pilot called the Aberdeen Radar REBROS sector at 80nm from Aberdeen, level at 3000ft. An 'Offshore Traffic Service' was agreed. Surveillance (radar) services in the REBROS sector are provided by using a system of surveillance known as Wide Area Multilateration (WAM). This system pin-points the position of aircraft by auto-triangulation, achieved from multiple aerial sites on various installations around the off-shore area. This provides very good low level coverage, but, as it is reliant on SSR data only, the service in limited to SSR contacts only. The 'offshore' nature of the Traffic Service relates to an agreement with the operators who use the service that the pilots remain responsible for terrain clearance. Otherwise the provision of a Traffic Service is in accordance with UK FIS (CAP774).

At 0836:01 the S92 pilot called the REBROS controller at 1000ft, having departed from the Britannia Rig (adjacent to the Alba rig which was the proposed destination for the EC175). An Offshore Traffic Service was agreed and a climb to 2000ft was accepted. At 0837:05 the EC175 pilot reported in communication with their destination rig and requested descent. The REBROS controller issued Traffic Information about the S92 and the EC175 pilot acknowledged the traffic and confirmed they would expedite their descent. There was 15nm horizontally and 1500ft vertically between the two aircraft at this time. The controller immediately passed Traffic Information to the S92 pilot about the opposite direction EC175. The controller then called the EC175 pilot to ensure that they were aware of the position of the S92. The crew confirmed that they were, and a request (by the controller) to report passing 1500ft was acknowledged.

At 0838:20 (Figure 1) the EC175 pilot had commenced descent with 12nm between the aircraft.

Figure 1 –0838:20 (Aberdeen WAM).

At 0839:27 (Figure 2) the aircraft were 7nm apart as the EC175 descended through the level of the S92 (which had now levelled at 2000ft).

Figure 2 0839:27 (Aberdeen WAM).

At 0840:08 the aircraft were 500ft vertically and 4nm horizontally apart with the EC175 still descending. ATSI were not able to measure the CPA but an assessment by Aberdeen ATCU established that the minimum distance between the aircraft was 2.79nm horizontally and 600ft vertically.

At 0840:53 (Figure 3) the radar image indicates the aircraft were passing each other and 1000ft apart vertically.

Figure 3 – 0840:53 (Aberdeen WAM).

The flight crew of the S92 received a TCAS TA when the opposite direction aircraft appeared on their TCAS for the first time at a range of 4nm, with an indication that the EC175 was already below them. The crew of the EC175 had the traffic indicating on their TCAS from when they commenced their descent and were aware of the range of the S92 throughout their descent.

Both aircraft had been given timely and accurate Traffic Information by the REBROS controller and no mention was made at the time that an Airprox had been filed. Under a Traffic Service the controller is required to issue Traffic Information in order to assist pilots to avoid other traffic. The controller is not required to achieve a deconfliction minima and the pilots remain responsible for their own collision avoidance[1].

[1] CAP493, Section 1, Chapter 12, Page 5.

UKAB Secretariat

The S92 and EC175 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[2]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[3].

Summary

An Airprox was reported when an S92 and an EC175 flew into proximity at 0839 on Friday 6th January 2017. Both pilots were operating under IFR in IMC, the S92 pilot in receipt of an Offshore Basic Service and the EC175 pilot in receipt of an Offshore Traffic Service, both from Aberdeen.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, the controller concerned, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board noted that the Airprox occurred in Class G airspace, in the North Sea area of helicopter operations 95nm north-east of Aberdeen. Both the S92 and EC175 pilots, operating IFR under IMC, were in receipt of an offshore Traffic Service from Aberdeen ATC. The S92 pilot was inbound to Aberdeen from the Britannia Platform and the EC175 pilot was outbound to the Alba North Platform, which is situated close to the Britannia Platform. Whilst still on the deck at the Britannia Platform the S92 pilot had been advised that the EC175 was routeing to the Alba North Platform with an ETA of 0844. He departed at 0833 and, because there was no traffic to affect, he climbed to 2000ft.

For his part, members noted that the EC175 pilot reported that they were also aware of the S92. They were maintaining 3000ft but requesting descent to 500ft to prepare for landing on their platform. ATC advised them that the S92 was climbing from 1000-2000ft and was in their 12 o'clock at 18nm. The pilot commented that he had a good TCAS return and had been given Traffic Information about the relative position of the S92 so he decided to descend expeditiously to get below the S92's level. When descending through 1100ft they received a TCAS TA on the S92 which was at 2000ft, 900ft above them. The S92 pilot reported receiving a TCAS TA as the EC175 passed a reported 400ft below them.

The Board then turned its attention to the cause of the Airprox. Members noted that the S92 pilot had reported that the risk of a collision was low, but it was apparent to the Board that he had been concerned about the EC175 descending through his level when both flights were being operated under IMC. Radar recordings showed that the EC175 had passed through the S92's altitude when they were 7nm apart and, by the time they passed each other, they were vertically separated by 1000ft. Accordingly the Board considered that the cause of the Airprox was that the S92 pilot had been concerned by the proximity of the EC175 but that there had been no risk of collision. The Board considered that separation was such that normal safety standards and procedures had pertained, and so the Airprox was therefore assessed as risk Category E.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The S92 pilot was concerned by the proximity of the EC175.

Degree of Risk: E.

[2] SERA.3205 Proximity.
[3] SERA.3210 Right-of-way (c)(1) Approaching head-on.

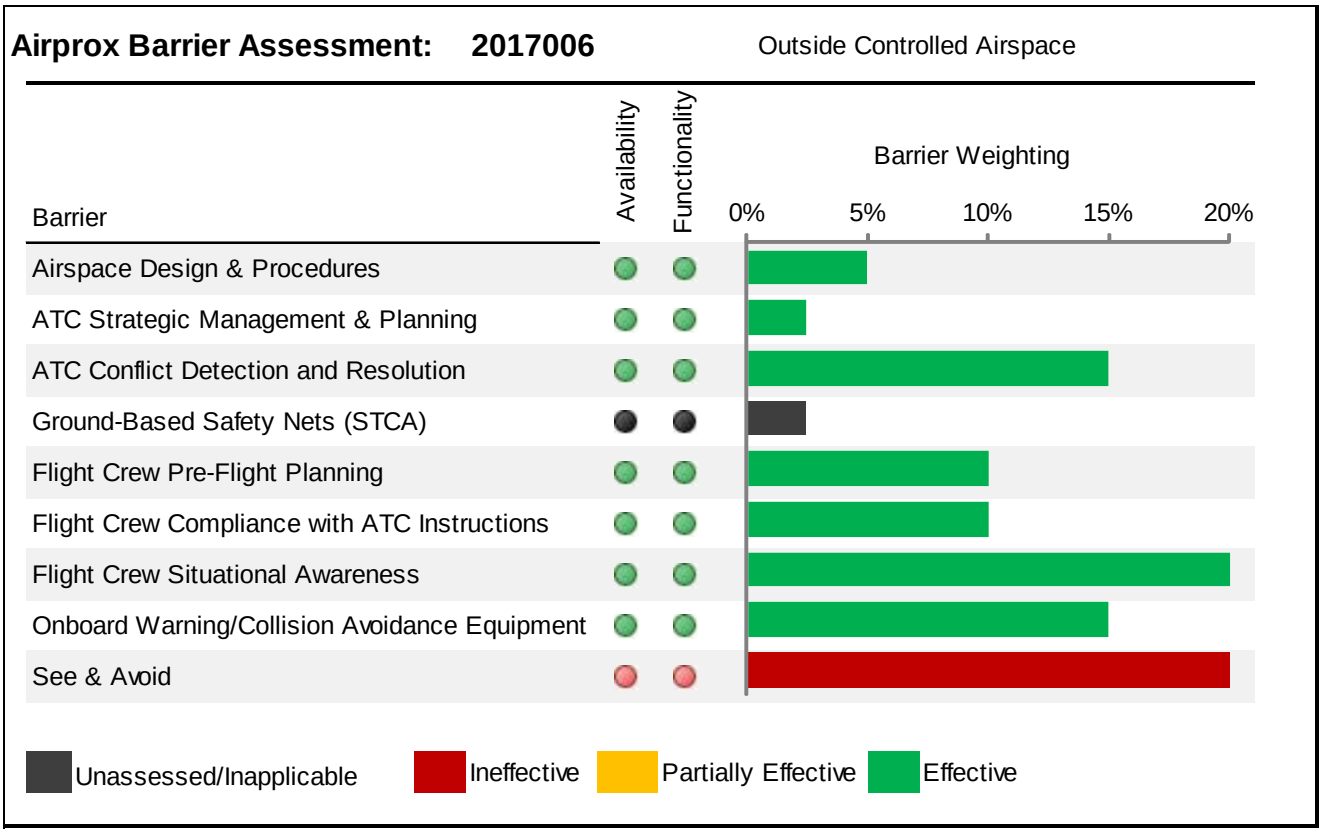
Safety Barrier Assessment[4]

The Board decided that the following key safety barriers were contributory in this Airprox:

Flight Crew Situational Awareness was considered **effective** because both pilots had been given Traffic Information about each other.

Onboard Warning/ Collision Avoidance Equipment was also considered **effective** because both pilots had received a TCAS TA.

See and Avoid was **ineffective** because both pilots were in cloud at the time of the Airprox (although the 'avoid' element could arguably be considered as having been effective given that the EC175 pilot had acted appropriately by expediting his descent in accordance with advice given to him by ATC).



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