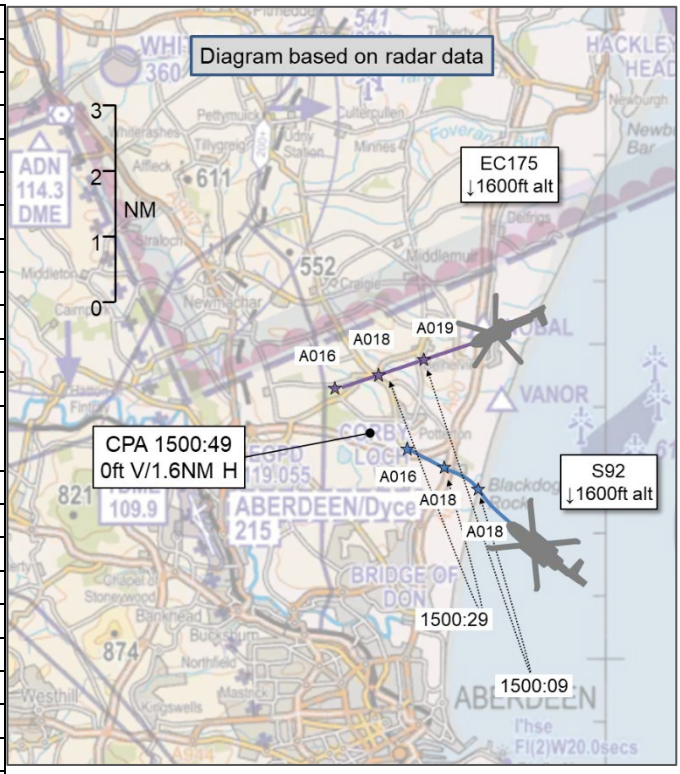
AIRPROX REPORT No 2020163

Date: 12 Nov 2020 Time: 1500Z Position: 5713N 00207W Location: Aberdeen

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	S92	EC175
Operator	Civ Comm	Civ Comm
Airspace	Aberdeen CTR	Aberdeen CTR
Class	D	D
Rules	VFR	VFR
Service	ACS	ACS
Provider	Aberdeen	Aberdeen
Altitude/FL	1600ft	1600ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Red, White, Blue	Yellow
Lighting	Nav, HISL, Position	Strobe, Landing, Nav
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	1000ft	2000ft
Altimeter	QNH (1007hPa)	QNH (1003hPa)
Heading	NR	240°
Speed	120kt	150kt
ACAS/TAS	TCAS II	TCAS II
Alert	Unknown	None
Separation		
Reported	NR	2NM H
Recorded	0ft V/1.6NM H	



THE S92 PILOT reports that on entry of the Aberdeen zone, they were cleared to join left-base RW16. They were informed about traffic entering the zone from the north, the other aircraft was cleared No2 to the S92 and to follow them in. The other pilot read back this clearance. On approaching left-base RW16, [the EC175] passed in front of them routing straight for finals. At that point the S92 slowed down from 120kts to 80kts and turned left to avoid conflict. The other pilot then said that they were faster than the S92 so they should be first, even though they had been instructed and had read back their clearance to be No2 back when they first entered the zone.

The pilot assessed the risk of collision as 'Medium'.

THE EC175 PILOT reports that following on from a change from an IFR to VFR approach with Aberdeen Radar, they were at 2000ft coasting in south of Balmedie for RW16. At around this point, traffic was reported to them by Tower at the Bridge of Don. They were to be No2 to them, however, they could see no traffic at that position, only another helicopter just inside GORSE, in agreement with the TCAS, putting it in their 7:30 position. After sometime of searching for another aircraft and not finding it clarity was sought from ATC. This confirmed the helicopter they had in sight as the aircraft to which they were to report No2. The controller kindly asked the other helicopter to go No2 to them at that point. As long as they had sight of the [S92] they had very comfortable separation (the Airprox report was a surprise to both crew), they had no amber alert or TA, and as the S92 was in fact continually behind them, airmanship would dictate that the onus was on them to slow down or turn away regardless of ATC instructions, in order to mitigate the risk of a perceived Airprox.

The pilot assessed the risk of collision as 'None'.

THE ABERDEEN CONTROLLER reports that there had been a busy couple of days, with high volumes of rotary traffic and multiple turn arounds, due to needing to catch up from a delayed flying schedule

earlier in the week caused by poor visibility both on and off shore. Flying conditions at the time of the event were VMC but with strong southerly winds, meaning most helicopters were recovering to the airfield VFR. This meant that the airspace was very busy and Traffic Information was frequently being passed to make the most efficient use of the runway and integration of VFR and IFR. [EC175 C/S] reported on frequency approaching the CTR boundary and was given Traffic Information on a series of southbound VFR light aircraft transiting on the VFR lane. The controller established that the crew were visual with this traffic and could maintain visual separation from it. Once this had been done, they then informed [the EC175] about their position in the recovery sequence for RW16 and provided specific Traffic Information to them on an S92 helicopter, south of their position. They gave [EC175 C/S] very specific instructions that they were to position No2 to [the S92] and once they had received verbal confirmation from [the EC175 pilot] that they would position No2, they gave them wake turbulence warning and distance advice. The controller then communicated with [the S92] informing them that the EC175 would position behind them. As both aircraft approached the radar head, it became apparent from the information on the ATM, in this case ground speed, that the EC175 had sped up and was now in close proximity, north of [the S92]. At this point the EC175 pilot transmitted and queried whether or not they were still No2 as they were now ahead of [the S92]. The controller immediately responded by transmitting to [the S92] to confirm that they had visual contact with [the EC175] and were willing to allow this helicopter to arrive No1. This they agreed to and confirmed visual contact, the controller then issued a confirmation instruction to [S92 C/S] to position No2 to [EC175 C/S] coupled with wake turbulence advice. Of note the initial arrival order had been established to make the best use of the runway, allowing the S92 to land and vacate around the mid-point of the runway, whilst a land after could have been issued to the EC175 allowing them to vacate close to the threshold, swapping the order around meant that the S92 crew would have to delay arrival whilst [EC175 C/S] vacated the runway. This had the potential to create a knock on effect, reducing the spacing for traffic on the ILS and, due to the unpredictable nature of the time and distance required for the S92 to land, potentially made it challenging to manage the vortex separation between the S92 and any ILS traffic.

Factual Background

The weather at Aberdeen was recorded as follows:

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METAR COR EGPD 121450Z AUTO 22013KT 9999 NCD 09/06 Q1003 NOSIG=
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Analysis and Investigation

Aberdeen Investigation

RW16 was in use at Aberdeen. [The S92] was inbound to the airfield under a VFR clearance to route via GORSE not above 1500ft. The crew of [EC175 C/S] had planned to conduct an IFR arrival, however following a period of vectoring to avoid a number of southbound light aircraft between the CTR boundary at Hackley Head and Longside airfield the crew elected to make a VFR join and were cleared into controlled airspace not above 2000ft.

At 1457:20 [S92 C/S] was at GORSE at 1500ft tracking approximately 280°. [EC175 C/S] was 6.1NM north of [S92 C/S] at 2000ft and tracking approximately 260°. At 1458:09 the pilot of [S92 C/S] made their initial call to the Aberdeen Tower controller (ADC), reporting that they were approaching Bridge of Don. ADC instructed the pilot to join on left base RW16 (throughout this event all pilot readbacks were correct).

At 1458:22 the pilot of [EC175 C/S] contacted ADC and reported they were visual with traffic on the Stonehaven Lane (sic). ADC sought confirmation that they were visual with traffic to the north of them (the first southbound light aircraft on the Peterhead Lane). The pilot confirmed this was correct. ADC issued a circuit joining clearance to [EC175 C/S] to "*continue left base 16, number two in the pattern, number one is a [S92] just coasting in at BOD not above two thousand feet*". Having acknowledged this the crew of [EC175 C/S] were given wake turbulence warning with recommended distance of 3NM which was also acknowledged by the pilot.

At 1458:57 the ADC advised the crew of [S92 C/S] that traffic north of them was an EC175 and that it was No2 to them. The pilot acknowledged this and reported they were “looking” for the traffic. At 1459:05 the aircraft were 4.56NM apart and converging with [S92 C/S] at 1500ft and groundspeed of 132kts and [EC175 C/S] indicating 2100ft at 138kts (Figure 1).

Figure 1

At 1459:24 the [EC175 C/S] commenced descent with a slight increase in groundspeed to ~145kts. At 1500:05 the distance between the aircraft was now 2.7NM and 150ft. The pilot of [EC175 C/S] asked ADC to confirm that they were No2 to traffic in their 8 o'clock, adding that they were ahead of them. ADC responded that was the intention but to standby (Figure 2).

Figure 2

At 1500:18 the ADC asked the pilot of [S92 C/S] if they were happy for [EC175 C/S] to go ahead of them. The pilot of [S92 C/S] responded they were and stated they were slowing down. The aircraft were now 2.15NM/75ft apart. ADC issued a wake turbulence warning to [S92 C/S] (Figure 3).

Figure 3

At 1500:28 the ADC advised the crew of [EC175 C/S] that they were now number one and to continue to final. Both aircraft subsequently landed safely. At 1501:00 the groundspeed of [S92 C/S] had reduced to 80-90kts with the closest point of approach recorded at 1.61NM and 75ft. At this time [EC175 C/S] was tracking 255° at 130kts groundspeed and [S92 C/S] tracking 300° at 86kts. [S92 C/S] was in [EC175 C/S]'s 7 o'clock position (Figure 4).

Figure 4

ADC issued a circuit joining clearance to the pilots of [S92 C/S] and [EC175 C/S] leaving both crews with the understanding that [S92 C/S] was No1. As part of the instruction to [EC175 C/S], ADC mentioned the other traffic was "coasting in at Bridge of Don" when in fact the aircraft was still 3NM offshore at this point]. The crew of [EC175 C/S] initially discounted the traffic they could see as being [S92 C/S] due to its distance from Bridge of Don at the time. As [EC175 C/S] descended the aircraft

picked up speed which then placed it in the position of coming into [S92 C/S]'s 1 o'clock position, prompting the pilot of [EC175 C/S] to seek clarification on the order as their aircraft was now better positioned for left base ahead of [S92 C/S]. Separation had reduced to 2.15NM and 75ft when the pilot of [S92 C/S] confirmed they were visual with [EC175 C/S], with the crew of [S92 C/S] reducing speed to arrange their flight to position behind the other aircraft. The aircraft's relative positions and tracks, combined with the fact all pilots were visual with the other aircraft, were such that it was unlikely that the two aircraft would become unsafely proximate. However, in the opinion of the crew of [S92 C/S] this situation did constitute an Airprox.

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.[1] If the incident geometry is considered as converging then the S92 pilot was required to give way to the EC175.[2]

Summary

An Airprox was reported when an S92 and an EC175 flew into proximity in the vicinity of Aberdeen airport at 1500Z on Thursday 12th November 2020. The S92 pilot was operating under VFR in VMC, and in receipt of an ACS from Aberdeen and the EC175 pilot was operating under VFR in VMC and was also in receipt of an ACS from Aberdeen.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first looked at the actions of the EC175 pilot. They had been told by ATC that they were No2 to the S92, readback that clearance correctly and so were in no doubt as to the order of recovery. The pilot reported that at first they believed that the S92 that they were visual with was not the aircraft they needed to route behind and so continued on track. A descent coupled with an increase in speed meant that they routed ahead of the S92 so the pilot queried the order of sequencing with ATC. Members thought that in positioning ahead of the S92 without first getting approval from ATC (**CF3**), the EC175 pilot deviated from their ATC clearance (**CF1**) and in doing so placed the controller in an invidious position. Furthermore, in presenting the controller with a *fait accompli* by positioning prior to receiving permission to route ahead (**CF2**) the pilot did not take into account that the controller had other considerations when positioning traffic, including maintaining the efficient use of the runway for other inbound aircraft.

The Board then looked at the actions of the S92 pilot, noting that they were visual throughout the incident, some members wondered whether the pilot was concerned for the safety of their aircraft, or was somewhat upset by having to delay to go behind the EC175, when the EC175 pilot was told by ATC to position behind them. Nevertheless, having been advised by ATC that the order was changing, they manoeuvred their aircraft and slowed down to ensure separation.

The Board then briefly looked at the actions of ATC, and acknowledged that they were placed in a difficult position, in that a plan was made and communicated to all involved, but when the EC175 pilot

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(2) Converging.

routed ahead of the S92, they were left with little option but to change the order, despite the difficulties that it would subsequently present.

When assessing the risk, the Board quickly agreed that because both pilots had been visual throughout the encounter and the S92 pilot had taken action to ensure separation, there had been no risk of collision. Furthermore, they also agreed that normal safety standards had pertained and therefore duly assigned a Risk Category E.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2020163		
CF	**Factor**	**Description**	**Amplification**
	Flight Elements		
x	**• Regulations, Processes, Procedures and Compliance**		
1	Human Factors	• Flight Crew ATC Clearance Deviation	
x	**• Tactical Planning and Execution**		
2	Human Factors	• Action Performed Incorrectly	Incorrect or ineffective execution
3	Human Factors	• Accuracy of Communication	Ineffective communication of intentions

Degree of Risk: E.

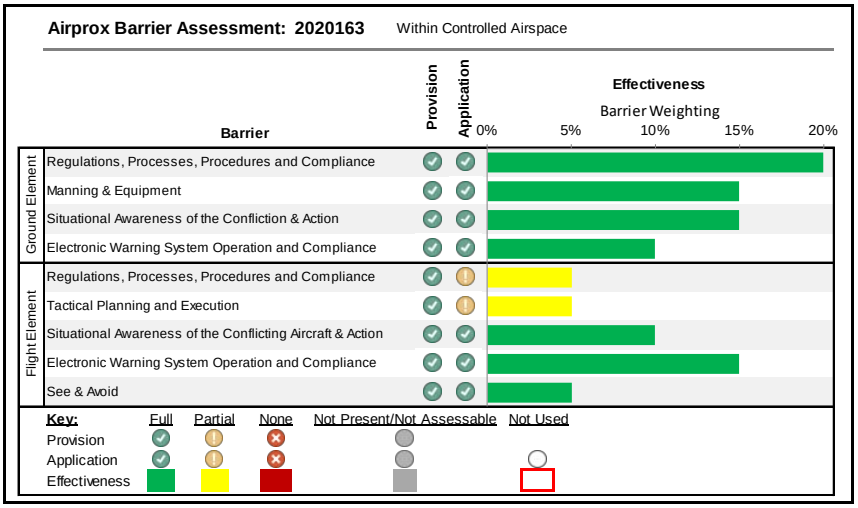
Safety Barrier Assessment[3]

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

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the EC175 pilot did not adhere to the ATC order of recovery.

Tactical Planning and Execution was assessed as **partially effective** because the EC175 pilot was informed that they were No2 to the S92, but positioned ahead of it.



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