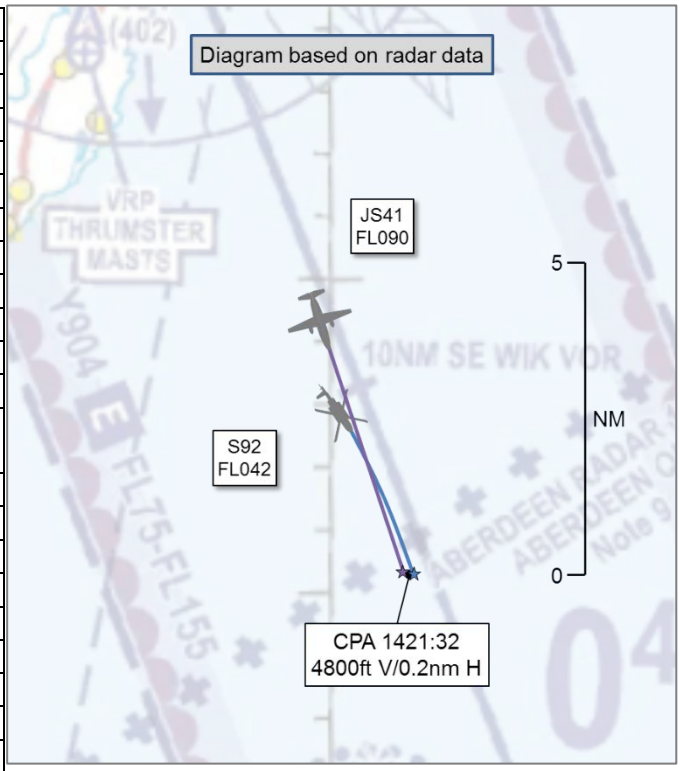
AIRPROX REPORT No 2018049

Date: 09 Apr 2018 Time: 1224Z Position: 5821N 00302W Location: 8nm SE WIK

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	S92	JS41
Operator	Civ Comm	CAT
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	IFR	IFR
Service	Basic	Basic
Provider	Wick	Wick
Altitude/FL	FL42	FL90
Transponder	A,C,S	A,C,S
Reported		
Colours	White	Company
Lighting	Nav, landing, anti-collision	Strobe, nav
Conditions	VMC	VMC
Visibility	10km	10km
Altitude/FL	4000ft	Not reported
Altimeter	QNH (1005hPa)	Not reported
Heading	162°	Not reported
Speed	135kt	170kt
ACAS/TAS	TCAS I	TCAS II
Alert	None	None
Separation		
Reported	Not seen	Not reported
Recorded	4800ft V/0.2nm H [0ft V/2.6nm H]	



THE SIKORSKY S92 PILOT reports that the incident occurred when the aircraft was cruising southbound at 4000ft on the Wick QNH on track to X-ray (approximately 8nm south of Wick). The crew were aware through communication with Wick that an aircraft was departing Wick and climbing through their level en-route to Aberdeen. The non-handling pilot (NHP) was in "full mode" on the nav display and noticed a TCAS return behind the aircraft which was a blue (filled) diamond indicating approximately 300ft below, climbing, 3 miles behind. The conflicting traffic continued to climb and close in on their position. The NHP made the handling pilot aware of this. As the handling pilot was in "arc mode" on his NAV screen (looking forward), he only received an indication of the TCAS traffic when it appeared on the bottom of his screen behind the aircraft icon. The handling pilot elected to make a turn to the right of approximately 40°. The time-frame between being made aware of the traffic and turning away was approximately 5-10 seconds. The NHP pilot made a radio call to inform Wick and the other traffic of the avoiding action. The conflicting traffic immediately called "visual with that traffic". No TCAS aural alert was heard. The avoiding action was initiated by the handling pilot (captain) in response to the TCAS indication on his display of the threat aircraft climbing through their level in close proximity (possibly also routing to X-ray or direct to ADN). At no stage did the crew gain visual contact with the conflicting traffic because the aircraft approached from behind and below a cloud layer obscuring the view above and ahead. Both crew members felt that a genuine risk of collision may have existed.

He assessed the risk of collision as 'Medium'.

THE JETSTREAM 41 PILOT reports that prior to departure from RW13 at Wick, Traffic Information was issued about the S92 helicopter flying south east of Wick towards Aberdeen at 4000ft. He briefed the FO and decided to maintain runway heading initially for separation. After take-off they had the traffic in sight and reported "traffic in sight" (with TCAS proximate traffic). It was seen as a black dot very far

in the distance. When they were passing the S92's level, he told the FO to steer right and intercept Y904 towards Aberdeen because there was plenty of separation and the traffic was clearly in sight on a beautiful clear day in Scotland. He did not think that this incident should be considered as an Airprox and was very surprised that an Airprox had been filed.

He assessed the risk of collision as 'None'.

THE WICK CONTROLLER reports that AFISO training was taking place at Wick with an On the Job Training Instructor (OJTI) in attendance. Both pilots had been advised of the AFISO training, had agreed to operate under a Basic Service, and were informed that full ATC would be available on request. The JS41 pilot had been given his clearance (FL90 via Y904 to Aberdeen) and was lined up on RW13 to report ready. At 1218, the S92 pilot reported in the Wick overhead and was passed Traffic Information on the JS41, "*a JS41 lined up runway 13 shortly to depart for Aberdeen climbing through your level".* The pilot acknowledged the Traffic Information. The JS41 pilot was provided with Traffic Information on the helicopter, *"S92 helicopter routing southbound to Aberdeen at altitude 4000ft, just through the Wick overhead now".* After the JS41 pilot had acknowledged it, he was given *"RW13, take off at your discretion".* The JS41 was airborne at 1220. The AFISO passed its departure time to Moray Support and the OJTI prompted the AFISO trainee to ask the S92 pilot to report 10nm south. The pilot replied that he was taking avoiding action on the aircraft behind them [the JS41]. The JS41 pilot immediately called on the frequency to confirm that he was visual with the helicopter. The OJTI took control of the position and initiated a level check from the JS41 pilot. He reported climbing through FL52 and the S92 pilot confirmed that he was still maintaining 4000ft on QNH 1008hPa. Because there was now more than 1000ft vertical separation between both aircraft, the JS41 pilot was transferred to the Moray Controller. The was subsequently co-ordinated with Lossiemouth and was transferred to them once the pilot had reported 10nm south.

Factual Background

The weather at Wick was recorded as follows:

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091120Z 16006KT 7000 FEW002 BKN003 06/06 Q1008
091150Z 14007KT 9999 SCT003 BKN07 07/07 Q1008
091220Z 17006KT 9999 FEW003 SCT010 07/06 Q1007
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Analysis and Investigation

CAA ATSI

ATSI had access to reports from the pilot of the S92 and Wick ATC. The area radar and Wick R/T recordings for the period were reviewed. ATSI also received a copy of the Wick unit investigation report. The S92 was an IFR flight from an offshore platform in the North Sea to Aberdeen, in receipt of a Basic Service from Wick Information. The JS41 was an IFR flight which had just departed from Wick, inbound to Aberdeen, also in receipt of a Basic Service from Wick Information. Screenshots in the report are taken from the area radar. There was an error detected with the Wick R/T timecode. All times are UTC, but are estimated.

At 1210:38 the S92 pilot, 18nm northwest of Wick, contacted Wick Approach, reporting level at altitude 4000ft. An ATCO OJTI supervising a trainee AFISO at Wick replied: *"[S92 C/S] this is Wick Approach good afternoon. Would you be happy to accept a Basic Service from Wick Information for FISO training, a full ATC service will be available on request?"* The pilot confirmed that they were happy to accept this, and were given the latest ATIS Information code (D) and Wick QNH by the trainee AFISO.

At 1211:25 the JS41 pilot, who had previously been given start clearance, requested taxi instructions. Again, the ATCO OJTI supervising the trainee AFISO asked if the pilot of the JS41 would be happy to accept a Basic Service from them: *"[JS41 C/S] Tower, are you happy to take a Basic Service from Wick Information for FISO training, a full ATC service will be available on*

request?" The JS41 pilot confirmed their acceptance, and was given taxi instructions by the trainee FISO.

At 1212:03 the AFISO instructed the S92 pilot to report overhead Wick.

At 1213:00 the AFISO advised the JS41 pilot of a significant change to the weather, confirming that ATIS Information D was now reporting the cloud as *"Few at 200ft and Scattered at 400ft"*. This was acknowledged by the pilot, who was then given a clearance to enter and backtrack RW13, and was requested to report lined-up.

At 1215:05 the JS41 pilot requested their clearance, but was advised that it had not yet been received and to expect a short delay. The clearance was subsequently passed at 1217:35.

At 1218:02 the S92 pilot reported overhead Wick (Figure 1).

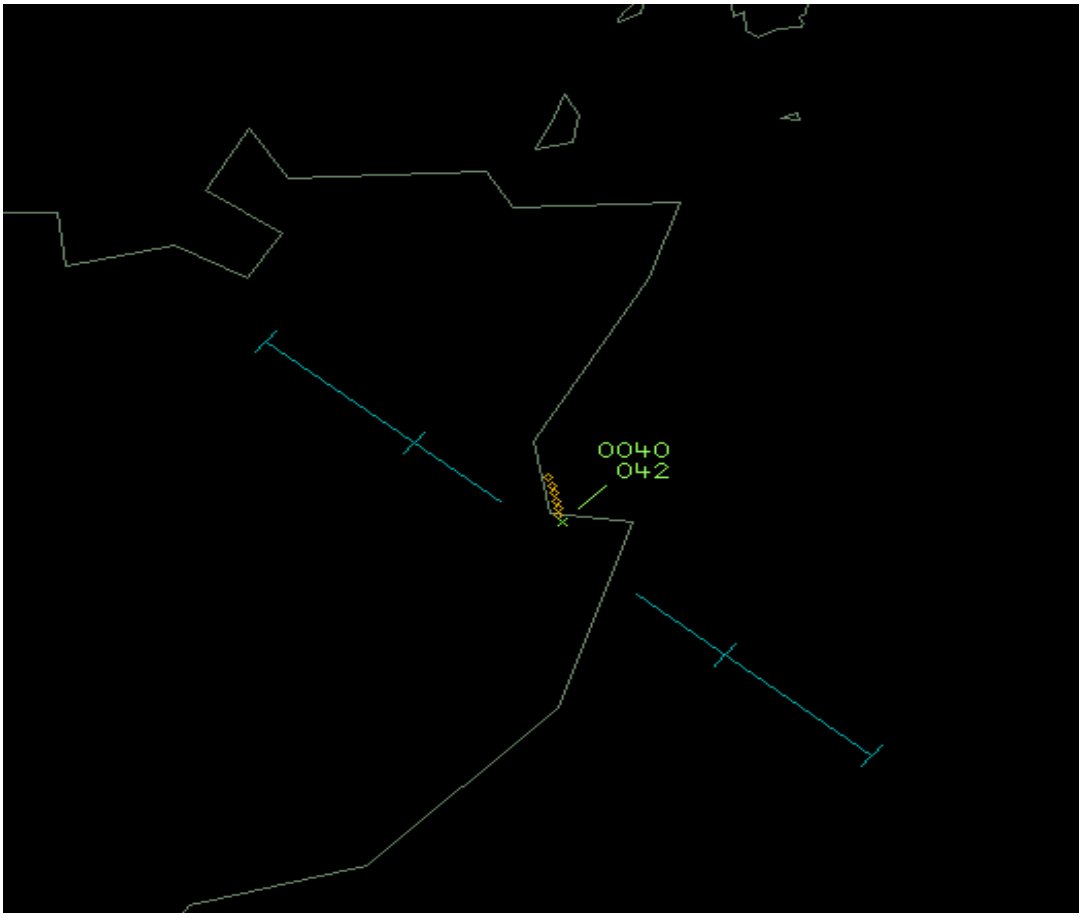


Figure 1 – 1218:02 (S92 transponding code 0040).

At 1218:10 the AFISO passed Traffic Information to the S92 pilot on the JS41, advising that: "T*here is a Jetstream 41 shortly to depart Runway 13, routing to Aberdeen, climbing through your level,"* which was acknowledged by the pilot.

At 1218:30 the JS41 pilot reported ready for departure. The AFISO passed them Traffic Information on the S92: *"there is an S92, routing to Aberdeen, via the Wick overhead, on a Basic Service. He's at 4000ft, just passed through the overhead now".*

The JS41 pilot acknowledged the Traffic Information and at 1218:50, the AFISO advised the JS41 pilot: *"Runway 13, take-off at your discretion (wind)"*.

At 1221:03, the JS41 became visible on the area radar replay (Figure 2).

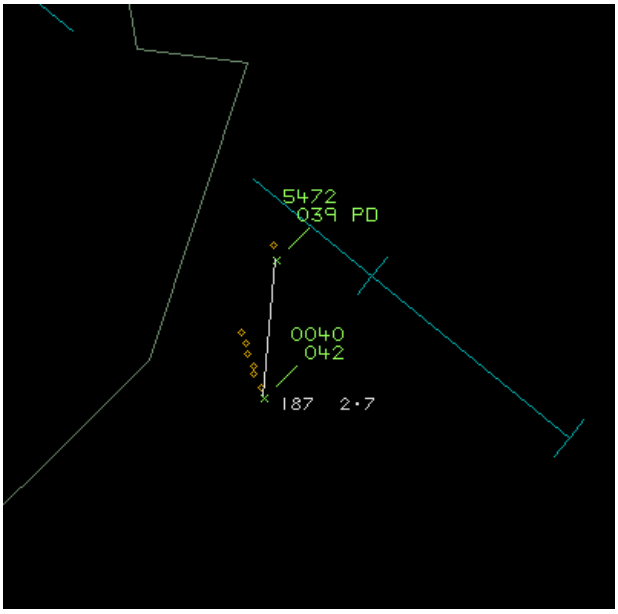


Figure 2 – 1221:03.

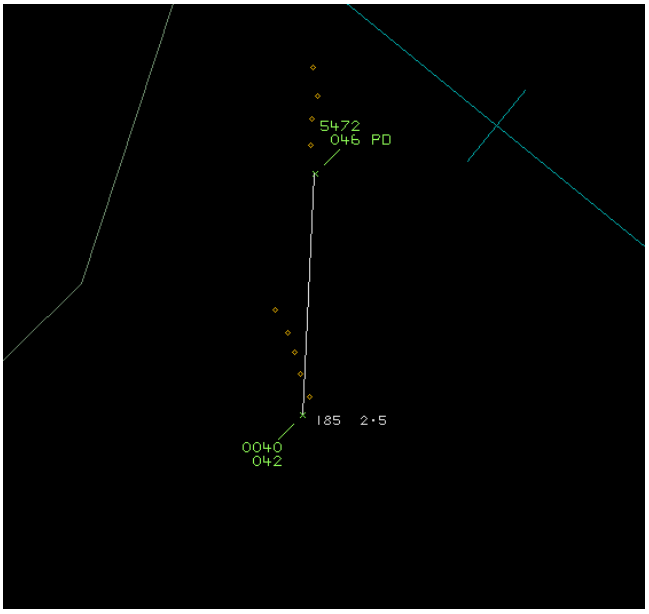


Figure 3 – 1221:20.
(JS41 transponding code 5472).

At 1221:15, the AFISO instructed the S92 pilot to report 10nm south to which, at 1221:20**,** the S92 pilot replied: *"[S92C/S] is taking evasive action from the traffic coming er from behind us"* (Figure 3).

The JS41 pilot then confirmed, at 1221:28, that they had the traffic in sight which was acknowledged by the pilot of the S92 (Figure 4).

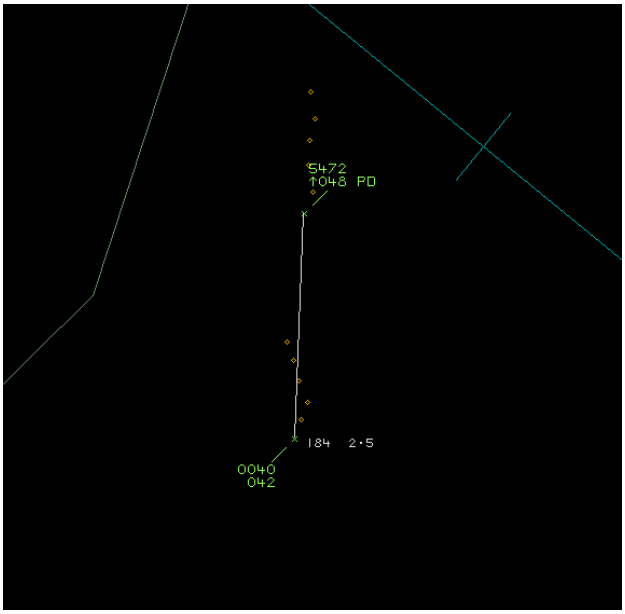


Figure 4 – 1221:38.

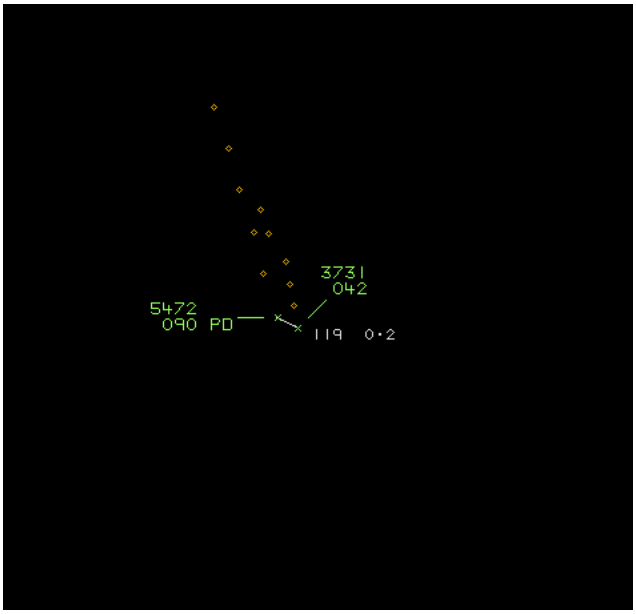


Figure 5 - CPA at 1224:12.

At the time the S92 pilot reported taking avoiding action at 1221:20, the aircraft were separated by 2.5nm laterally and 400ft vertically. CPA was not until 1224:12, when the aircraft were separated by 0.2nm horizontally and 5200ft vertically, by which time the JS41 had been transferred to Scottish Control, and the S92 to Lossiemouth (Figure 5).

The Wick AIP entry states, in Section 2.18 – Air Traffic Services Communications Facilities:

> *Due to AFISO training and maintenance of currency, AFISO phraseology may be in use during ATC published hours, with ATC in attendance. ATC service will remain available at all times. Pilots will be advised of periods of AFISO training, normally via ATIS.*

Further, in Section 7 – UK Flight Information Services, that:

> *(a) During notified ATC hours of service:*
>
> *(i) A procedural ATS will be routinely applied to IFR flights. Pilots will be expected to accept levels, radials, tracks and/or time allocations that may require flight in IMC, to achieve planned deconfliction minima from other aircraft being provided by a procedural ATS.*

The published hours for 9th April 2018 were 0600-1930UTC.

The Wick ATIS was checked, but during the period 1150-1230, no information regarding AFISO training was included.

The Wick unit report confirmed that:

> *'during the incident, both aircraft were being provided with an AFIS service under observation from the OJTI.'*

The Wick MATS Part 2 states:

> *A Procedural Service will routinely be applied to inbound and outbound IFR traffic, however a pilot may request a Basic Service if they consider that more appropriate."* Also, *"For IFR flights, requests for a Basic Service should normally originate from the pilot and not be offered by the ATCO except in the case of establishing the service requirements of overlying IFR traffic.*

The same procedures do not apply to transit aircraft, irrespective of flight rules, and where, if the pilot does not request a specific service, Wick ATC will ask the question.

The Wick MATS Part 2 details the following procedure for the training and maintenance of competence of AFISOs*:*

> *AFISOs will attend for Recency sessions by prior arrangement with the USO.*[1] *The USO shall brief the AFISO and the AFISO will then occupy the operational position. However, an assessment of actual and planned traffic for the period of the AFISO Recency session check is to be made by the USO before the AFISO takes over.*

To ensure that pilots are advised of the situation. The USO will make the initial request using the following RTF phraseology:

> "*This is Wick APP/TWR. Will you accept a Basic Service from Wick Information to facilitate AFISO training? A full ATC service will be available on request*."[2]

Both the S92 and JS41 pilots were operating IFR. A Procedural Service was available to both pilots. In accordance with CAP774, UK Flight Information Services,

> *A pilot shall determine the appropriate ATS for the various phases and conditions of flight and request that ATS from the controller/FISO. If a pilot fails to request an ATS, the controller/FISO should normally ask the pilot to specify the ATS required, apart from the following circumstances:*

[1] Unit Standards Officer
[2] Section 10 – General Administration

FISOs will only provide a Basic Service; Controllers at approved ATC Units that do not have surveillance equipment available will routinely apply a Procedural Service to aircraft carrying out IFR holding, approach and/or departure procedures.

Had both pilots requested a Procedural Service, then the ATCO OJTI would have assumed control and have been required to:

provide deconfliction instructions by allocating levels, radials, tracks, routes and time restrictions, or use pilot position reports, aimed at achieving a planned deconfliction minima from other aircraft to which the controller is providing a Procedural Service in Class G airspace.

The deconfliction minima are:

1,000ft vertically; or 500ft vertically (subject to regulatory approval); or those lateral and longitudinal criteria listed in CAP 493 as lateral and longitudinal separation standards.

AFISOs at Wick are trained for and routinely provide a Basic Service to IFR aircraft, but normally outside of the published hours for ATC. Those aircraft, (for example SAR and medical helicopters), are fully aware of the limitations of the Basic Service available to them.

Neither the S92 nor the JS41 pilots were passed reciprocal Traffic Information, prior to being asked about accepting a Basic Service. Therefore, neither pilot was given sufficient information for them to make an informed decision as to the level of ATS they would require. Neither the pilot of the JS41, nor the pilot of the S92 commented on the appropriateness of the service they accepted. However, it is not standard ATC procedure to inform pilots of the traffic situation prior to service negotiation. The person who was ultimately in possession of the full traffic situation was the ATCO OJTI. Wick ATC reported that it was the ATCO OJTI's perception that the improving conditions meant that both pilots would be able to separate themselves visually; however, there was no attempt by the ATCO OJTI to determine if either aircraft had the other in sight before allowing the JS41 to depart.

The Wick unit report stated that:

The METAR's show how the weather, though previously poor, was clearing from the Southeast. At the time of the incident, cloud and visibility to the Southeast of Wick was good and there was no reason to expect that the departing (JS41) would not be able to maintain visual contact with the S92.

The pilot of the JS41 reported that prior to departure, and having received the Traffic Information on the S92, they planned on maintaining runway heading initially for separation. Furthermore, the pilot reported having the S92 in sight after take-off, reported this to Wick ATC, and stated that the S92 *"was seen as a black dot very far in the distance. When we were passing his level I told the FO to steer right and intercept Y904 towards Aberdeen, since there was plenty of separation and the traffic was clearly in sight on a beautiful clear day in Scotland."*

The report from the pilot of the S92 indicates that neither a TCAS TA nor RA was received, but that based on the pilot's analysis of the information being presented to them by the system, they elected to initiate "evasive action".

Wick ATC commented that it was unusual for the JS41 crew not to request a Procedural Service. They also commented that in their opinion not all operators are fully aware of the limitations of a Basic Service and the lack of any deconfliction advice.

Both pilots were being provided with a Basic Service in Class G airspace and were passed appropriate Traffic Information. Based on the flight profiles of the aircraft and the prevailing, although improving weather conditions, a potential confliction existed, and might have been better handled through a more appropriate ATC service being offered/requested.

UKAB Secretariat

The S92 and JS41 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[3].

Summary

An Airprox was reported when an S92 and a JS41 flew into proximity near Wick at 1224hrs on Monday 9th April 2018. Both pilots were operating under IFR in VMC, in receipt of a Basic Service from the Wick AFISO.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board first discussed the actions of the Wick controller. Members noted that AFISO training was taking place, and that this had been considered necessary to ensure AFISO recency. They also noted that, in accordance with Unit procedures, the monitoring controller asked both pilots if they would be happy to receive a Basic Service for AFISO training, but with a full ATC service available if requested. The Board noted that, at the time, neither pilot had been informed about the other aircraft, and some members wondered whether, if they had received this information, they would have been less inclined to accept a Basic Service. Nevertheless, they were given the option to opt for a different ATC service if they had considered it appropriate and no request was subsequently made by either pilot. Civil Airline pilot members commented that, given the nature of his flight, they thought it inappropriate for the JS41 pilot to agree to a lower level of service from that which was available; although the Board did not have access to the operator's Ops Manual, they felt that CAT pilots had a duty of care to those they carried as passengers to always operate with the highest level of available service. If Wick required AFISO training then it was not for CAT operators to degrade their safety in order to oblige, it was for Wick to arrange alternative means of training, be it through simulation or with non-CAT aircraft.

When the S92 pilot reported overhead Wick as requested, he was advised about the JS41, which would shortly be departing from RW13 routing to Aberdeen and climbing through his level. He acknowledged this call. The Wick AFISO then passed Traffic Information to the JS41 pilot about the S92 having just passed overhead at 4000ft, routing to Aberdeen, which was acknowledged. Just less than one minute after the S92 pilot had reported overhead, the JS41 pilot was advised to take off at his discretion (standard phraseology for an AFISO). Several Board members wondered whether it had been appropriate to allow the JS41 to depart before ensuring that its pilot could at least see the S92, especially because the previous weather observation had reported broken cloud at 700ft (although this had significantly improved before the JS41 departed and the JS41 pilot commented in his report that he was content with the weather conditions at the time).

Civil Airline pilot members noted that the JS41 pilot reported that he had briefed the First Officer that they would initially maintain runway heading for separation purposes but that the AFISO was not made aware of this decision. They also noted that the JS41 pilot had reported that, after departure, they had seen the S92 both on TCAS and as a 'black dot very far ahead' but they also did not report this to the AFISO. As a result, the S92 pilot was also unaware that the JS41 crew were visual with him and it was only after the S92 pilot had reported taking evasive action from the traffic behind that the JS41 pilot reported on frequency that they had the S92 in sight.

Ultimately, the Board agreed that the AFISO had carried out his duties in accordance with the procedures for that type of service. He had informed the JS41 pilot of the position and routing of the S92 prior to his departure and the pilot could, therefore, have delayed his departure if he had considered it necessary. However, a request to establish if the JS41 pilot had visual contact with the S92 would have assisted the situation. Some members considered that, rather than the AFISO relying

[3] SERA.3205 Proximity.

on visual detection and separation, it would have been appropriate in the circumstances and weather for ATC to have provided a Procedural Service to both pilots, even though neither had requested a change of service. The two aircraft could then have been placed on appropriate tracks to ensure lateral separation until vertical separation had been provided. This, they considered, would have removed the concern of the S92 pilot.

The Board could understand why the S92 pilot had been concerned about the JS41 which was catching him up, albeit at only 35kt overtake; he could not see the JS41 because of its position behind his helicopter. Notwithstanding, it was clear that the non-handling pilot had reported that he could see the JS41 on TCAS (initially 3nm behind them, 300ft below) and members wondered whether the non-handling pilot should have been more pro-active in providing information to the handling pilot. Had he done so, then it would have been evident that the JS41 had climbed through their level at about 2.6nm behind and was therefore no longer a threat. Seemingly without this information, the handling pilot decided to make a 40° turn to the right and some members wondered how effective the S92 cross-cockpit information flow had been.

Turning to the cause, the Board agreed that, because of his action in making an avoiding action turn it was apparent that the S92 pilot was concerned by the proximity of the JS41 and that this was why he had filed the Airprox report. Some members wondered whether the incident was best described as a TCAS sighting report but it was agreed that this did not reflect the clear concern in the S92 pilot's mind. As to the risk, members agreed that when the two aircraft were 2.5nm apart, the JS41 was already 400ft above the S92, and with the S92 in sight. Consequently, the Board considered that there had been no risk of a collision and that safety had not been compromised. The Airprox was, therefore, assessed as risk Category E, normal safety standards had pertained.

PART C: ASSESSMENT OF CAUSE AND RISK

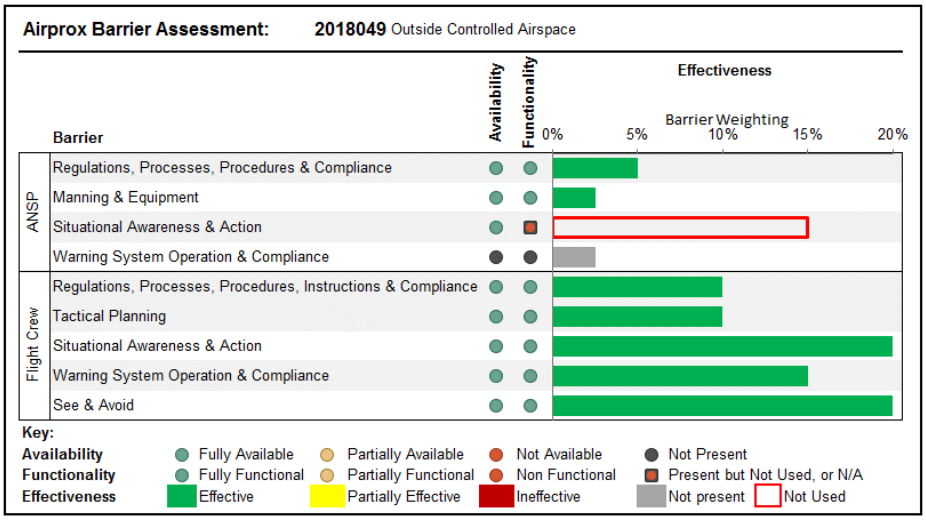
Cause: The S92 pilot was concerned by the proximity of the JS41.

Degree of Risk: E.

Safety Barrier Assessment[4]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factor had been that all safety barriers concerned were effective with the exception that:

> **ANSP Situational Awareness and Action** was assessed as **not used** because a higher level of service was available that would have resulted in greater deconfliction of the 2 aircraft.



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