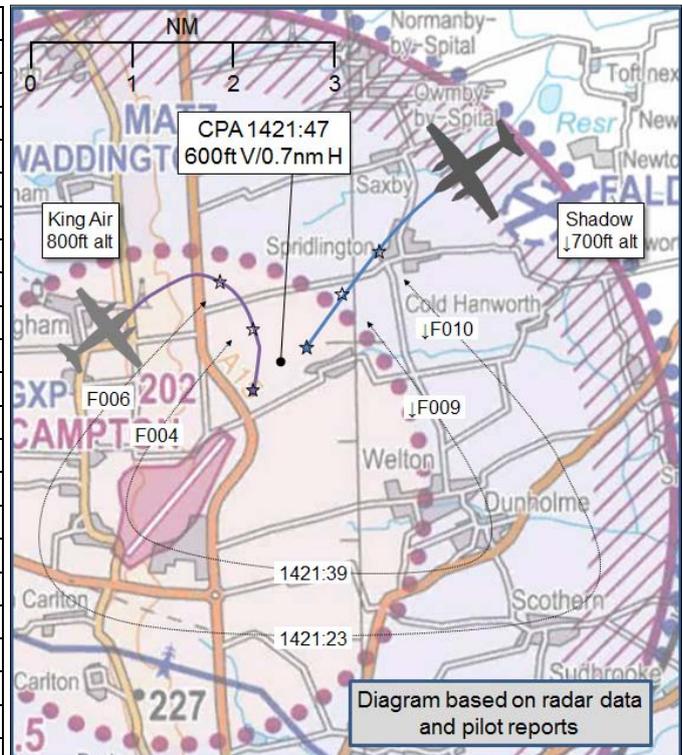


**AIRPROX REPORT No 2016070**

Date: 05 May 2016 Time: 1421Z Position: 5320N 00031W Location: Scampton

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	Shadow	King Air
Operator	HQ Air (Ops)	HQ Air (Trg)
Airspace	Scampton ATZ	Scampton ATZ
Class	G	G
Rules	VFR	VFR
Service	Traffic	Aerodrome
Provider	Scampton SRA	Scampton ADC
Altitude/FL	900ft	400ft
Transponder	A,C,S	A,C,S
<b>Reported</b>		
Colours		
Lighting		
Conditions	VMC	VMC
Visibility	>10km	
Altitude/FL		
Altimeter		
Heading	220°	220°
Speed		
ACAS/TAS	TCAS I	TCAS I
Alert	TA	None
<b>Separation</b>		
Reported		
Recorded	600ft V/0.7nm H	



**THE SCAMPTON SRA CONTROLLER** (based at Waddington) reports that he was conducting his second SRA of the day, which involved a Shadow aircraft, and was undergoing a Standards check at the time. He contacted the ADC at 4 miles for the clearance and was given a ‘continue’, which was passed to the pilot and acknowledged. He knew Scampton ADC was busy, so this was not unexpected. He saw an aircraft on the radar in the late downwind position but, when he turned the SSR on he couldn’t see a height. However, he was then busy and didn’t keep a close ident on that track. At 2½miles he went back through to ADC for a clearance. As he went through for the clearance, he inadvertently kept the radio transmit button depressed so that when he made the request to ADC “[Shadow C/S] touch and go” the pilot heard it and replied “[Shadow C/S] clear touch and go”. At the same time, the ADC replied with the instruction to break-off the approach with one ahead, the SRA controller immediately gave this to the Shadow pilot, who read-back the break-off instruction. The aircraft that was previously downwind could then be seen to turn final; the controller turned on the SSR and could now see that this aircraft was only 400ft below the Shadow and half a mile ahead. He called the traffic to the Shadow pilot who reported visual, then joined deadside and continued with ADC.

He perceived the severity of the incident as ‘Medium’.

**THE SHADOW PILOT** reports that on recovery to Scampton he was asked to fly an SRA for controller currency, which he was happy to do. He was handed over to talkdown and commenced a normal approach profile. At approx 5nm, he became aware of a TCAS contact in the visual circuit and surmised that to be the reason for the subsequent delayed final clearance. He became visual with the traffic, a King Air, and concurrently the TCAS issued a aural warning against it. He maintained visual contact with it, and continued under the assumption that the King Air pilot was also aware of his position, co-ordinated and would be extending downwind. He then noticed the traffic turning final to cut in front, but at the same time he was given a clearance to land. The clearance was

read back to the controller, and immediately after he initiated a go-around, the instruction to break-off the approach was given by the talkdown controller. He joined deadside and switched to the ADC frequency. The subsequent visual circuit was flown without incident. The pilot noted that this incident occurred in VMC and he was visual with the circuit traffic at all times. Had it been IMC, or if he was not visual he would not have received a TCAS RA because both aircraft would have been below the minimum height for TCAS to be activated. In that circumstance he believes it would have been an Airprox situation.

He perceived the severity of the incident as 'Negligible'.

**THE KING AIR PILOT** reports that he had just completed a combined period of IRT and handling check, and had joined the Scampton visual circuit for two circuits. He was made aware of the joining instrument traffic by ATC in the usual manner. He turned downwind and gave the usual call, at the time he was number 1 because there was no other circuit traffic. The visibility was good, and he was visual with the joining instrument traffic from early on in the downwind leg; he remained visual throughout. He transmitted the finals call, and was given clearance to land from ATC. He was aware the ATC had instructed the instrument traffic to go-around and was visual with it as it did so; it ultimately overtook above and to his left. Only after landing, having spoken to the other crew, was he made aware that the other aircraft had also been given a clearance to land. He did not receive a TCAS RA, and the situation did not feel particularly close, so he did not think that this was an Airprox occurrence.

He perceived the severity of the incident as 'Low'.

**THE ADC CONTROLLER** reports that she was the OJTI<sup>1</sup> in the bandboxed ADC/Grd position. The 8nm call was received for the Shadow to land, and the King Air was downwind to touch and go. She discuss a plan with the UT, and he decided to give the runway to the King Air if he called final imminently, which is what subsequently happened. The rationale behind this was that the King Air would be likely to be off the runway before the Shadow would require it, and with no ATM, this seemed a sensible plan. The 4nm call came through the clutch-line and the controller was told to 'call by two'. When the 2½nm call came, the King Air was still on final so the Shadow was instructed to break off the approach.

He perceived the severity of the incident as 'Low'.

## Factual Background

The weather at Scampton was recorded as follows:

METAR EGXP 051450Z 16010KT CAVOK 19/05 Q1018 BLU=

Portions of the tape transcripts between Waddington SRA, Scampton Tower, the King Air and the Shadow are below:

From	To	Speech	Time
SRA	SCA TWR	Four miles one thousand three hundred and thirty feet (clutch and Transmit) [Shadow c/s] land	14:20:42
SCA TWR	SRA	[Shadow c/s] break off (pause) [shadow c/s] call by two	14:20:47
SRA	SCA TWR	[Shadow C/S] final clearance delayed continue approach acknowledge	14:20:52
King Air	SCA TWR	[King Air c/s] finals gear down	14:21:01
SCA TWR	King Air	[King Air c/s] clear to touch and go	14:21:04
King Air	SCA TWR	Clear touch and go [King Air c/s] visual with instrument traffic	14:21:06
SCA TWR	King Air	You are number one to that	14:21:08

<sup>1</sup> On The Job Training Instructor

SRA	SCA TWR	Two and a quarter miles [Shadow C/S] land	14:21:24
SCA TWR	SRA	[Shadow c/s] break off the approach one ahead acknowledge	14:21:27
SRA	Shadow	[Shadow C/S] uh break off the approach one ahead acknowledge	14:21:27
Shadow	SRA	[Shadow C/S] is going around	14:21:34
SRA	Shadow	[Shadow C/S] that traffic twelve o'clock half a mile crossing right left ahead four hundred feet below	14:21:41
SRA	Shadow	[Shadow C/S] are you visual?	14:21:51
Shadow	SRA	[Shadow C/S] we're visual we're deadside this time	14:21:53
Shadow	SRA	[Shadow C/S] to tower	14:21:57
SRA	Shadow	[Shadow C/S] roger join deadside runway two two right hand continue with Scampton tower two eight one decimal 32	14:21:59
Shadow	SRA	Scampton stud two [Shadow C/S].	14:22:05

## Analysis and Investigation

### Military ATM

An Airprox occurred on 5 May 16 at 1421 on finals to RW22RH at RAF Scampton. The incident took place between a Shadow aircraft conducting an SRA and a King Air in the visual circuit.

At 1421:06 (Figure 1), the King Air was downwind for RW22RH and the Shadow was approximately 5 mile final. The King Air called visual with the Shadow at this time and the radar replay shows 2.8nm and 600ft between the two aircraft.

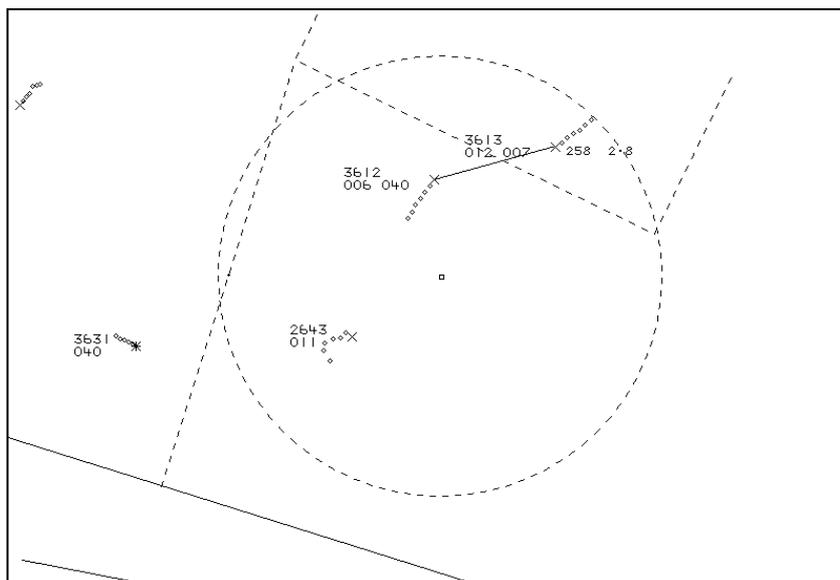


Figure 1: Geometry at 1421:06 (King Air squawking 3612; Shadow squawking 3613).

At 1421:24 the Scampton Tower controller received, through the clutch line, the SRA controller requesting a 2¼nm clearance for the Shadow. At 1421:27 (Figure 2) The Scampton Tower controller issued a break off for the Shadow aircraft as the King Air had been given a clearance to use the runway.

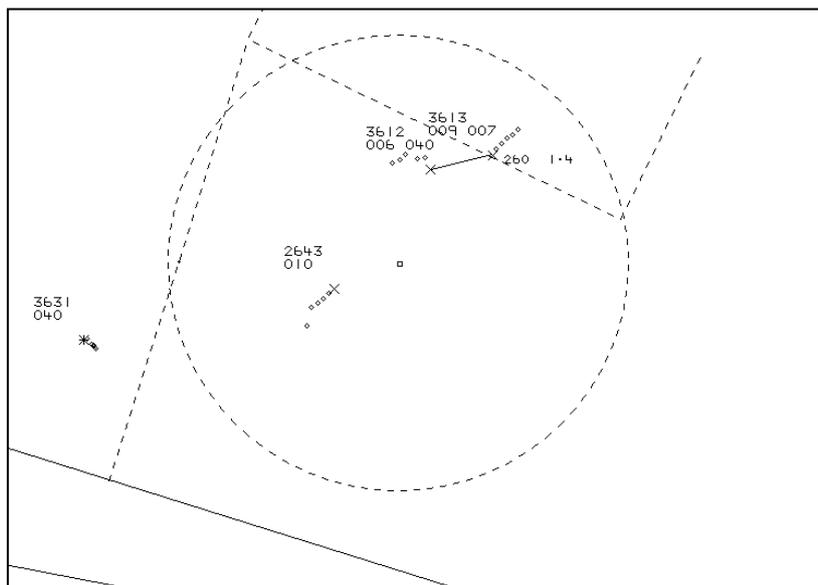


Figure 2: Geometry at 1421:27 (King Air squawking 3612; Shadow squawking 3613).

The CPA at 1421:51 (Figure 3) is 0.7nm. At this point the SRA controller asked The Shadow aircraft if it was visual with the King Air. The Shadow pilot called visual with the King Air and stated that they were positioned deadside at 1421:53.

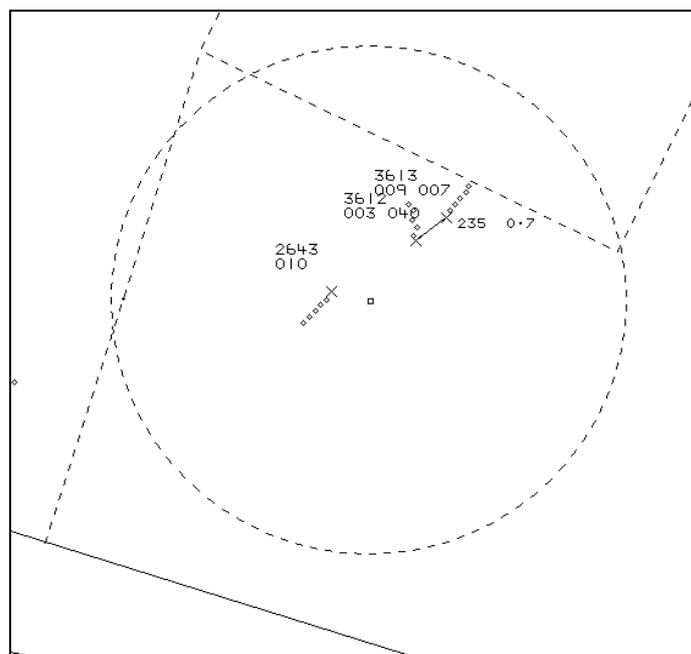


Figure 3: Geometry at 1421:51 (King Air squawking 3612; Shadow squawking 3613).

Both pilots reported that they were visual very early on in the incident and felt that at no point was safety compromised. The Shadow aircraft conducting an SRA approach in this instance was not expecting the King Air to turn finals but was able to initiate a go around and at the same time received the 'break off approach' from the SRA controller.

RAF Scampton Aerodrome Control position does not have a radar monitor for the sequencing of radar traffic. The controller sequenced the traffic according to the information they had from their lookout (for the King Air) and the clearance calls from the SRA controller for the position of the Shadow. Their decision to put the King Air ahead of the radar traffic was based upon the controller believing that there was enough space for the King Air to touch-and-go and the Shadow to conduct its approach.

The Waddington controller conducting the SRA was being screened on a standards check. The controller was expecting not to receive a clearance at the 4nm point as they were aware that the Scampton Visual circuit was active. On requesting the clearance, at 2¼nm, the SRA controller held the frequency transmit button throughout, this transmitted the radar clearance line call between the SRA controller and the Scampton Tower controller to the Shadow aircraft. On hearing this transmission the Shadow pilot assimilated this as his clearance to 'land'. The SRA controller received the instruction from the Scampton Tower controller to 'break off the approach', as the King Air had been given clearance to use the runway, and the SRA controller then instructed the pilot to break off the approach.

The radar analysis data shows the aircraft to have been no closer than 0.7nm and 700ft at CPA. The information displayed and proximity of the contacts may well have presented differently to the SRA controller due to the location of the radar and return shown on the screen. This might have increased the controllers concern about the separation between the two aircraft.

The inadvertent transmission on frequency whilst selecting the radar clearance line can happen, especially with an SRA approach where there is a significant increase in phraseology compared to a PAR. The SRA controller was being assessed on a standards check; this can add self-induced pressure and increase human factors errors such as the inadvertent transmission.

The SRA controller assessed the situation as an Airprox due to their concern with separation between the two aircraft. Both pilots were visual with each other at a very early stage in the incident and hence they perceived the severity of the situation as low.

### **UKAB Secretariat**

The Shadow and King Air pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>2</sup>.

## **Comments**

### **HQ Air Command**

This incident highlights the requirement for crews to maintain a high level of situational awareness and a robust lookout when joining or operating within a busy operational aerodrome; especially when conducting IFR procedures in a visual environment. Despite the best intentions of the Scampton ADC to provide flexible management of the visual circuit, an ambitious plan led to the visual traffic being sequenced ahead of the aircraft on an instrument approach. This oversight was then compounded by the SRA Controller who inadvertently transmitted the request for landing clearance from the ADC to the Shadow pilot; who, in turn, interpreted the transmission as permission to land. Although this error was quickly corrected when the ADC directed that the approach be broken off, the Shadow pilot had already assessed that a go around was the most appropriate course of action to avoid conflict with the King Air.

## **Summary**

An Airprox was reported when a Shadow and a King Air flew into proximity at 1421 on Thursday 5<sup>th</sup> May 2016. Both pilots were operating under VFR in VMC, the Shadow pilot in receipt of a Traffic Service from Scampton SRA and the King Air pilot in receipt of an Aerodrome Service from Scampton ADC.

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<sup>2</sup> 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 and operating authorities.

The Board first looked at the actions of the controllers involved and noted that the Scampton SRA Controller was based at Waddington and was undergoing a standards check. It was thought likely that this placed some self-induced pressure on the controller which could well have been the cause of the mistaken transmission of the request for the clearance to the Shadow pilot. Given that the pilots had reported the incident as negligible/low risk, members also wondered whether it was possible that his heightened state of awareness because of the check meant that he might have assessed the two aircraft as being closer together than they actually were. Despite the mix-up with his clearance transmission, the Board didn't think that this had any major bearing on the incident, which was more to do with the judgement of sequencing and separation by the ADC. Turning to the ADC, the Board noted that although he was an experienced controller, he was new to Scampton and was being 'screened' by another Scampton-qualified controller. Noting that the plan to fit the King Air in first was always going to be ambitious, the Board debated whether the controllers should have given the priority to the aircraft on the instrument approach, which is the case for most military airfields. In this respect, the Board noted the comments that Scampton VCR didn't have the benefit of an Air Traffic Monitor in the VCR; however, they concluded that this did not have any significant bearing on the incident because the King Air pilot had called finals some 20 seconds after the SRA controller had requested the 4-mile clearance. Members were somewhat surprised that the controller gave a delayed clearance to the Shadow, and then afterwards cleared the visual circuit traffic to use the runway ahead of it. Whilst acknowledging that some airfields routinely gave delayed clearances for training purposes even if it was obvious the aircraft wouldn't get the approach in, they couldn't understand why, in this case, the Shadow wasn't given a clearance to land and the King Air asked to extend behind the radar traffic, or be sent around. Some members wondered whether the controllers had made a plan based on the expectation that the King Air would call first, and didn't update the plan when the SRA controller called for a clearance first.

In looking at the actions of the pilots, the Board thought that there was little else they could have done in the circumstances. Although he thought he had been given a clearance, the Shadow pilot saw the aircraft ahead turn onto finals and defensively broke off his approach. For his part, the King Air pilot was given a clearance by ATC to use the runway and had no reason to question this.

The Board then looked at the cause of the Airprox and, noting that the pilots had both been visual with each other and had not thought that there was a problem with the separation, the Board determined that the cause of the Airprox was that the SRA controller had been concerned by the proximity of the two aircraft. The risk was assessed as being Category E; although the criteria for reporting an Airprox had been met, normal procedures and safety standards had pertained.

## **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The SRA controller was concerned by the proximity of the Shadow to the King Air.

Degree of Risk: E.