AIRPROX REPORT No 2013029

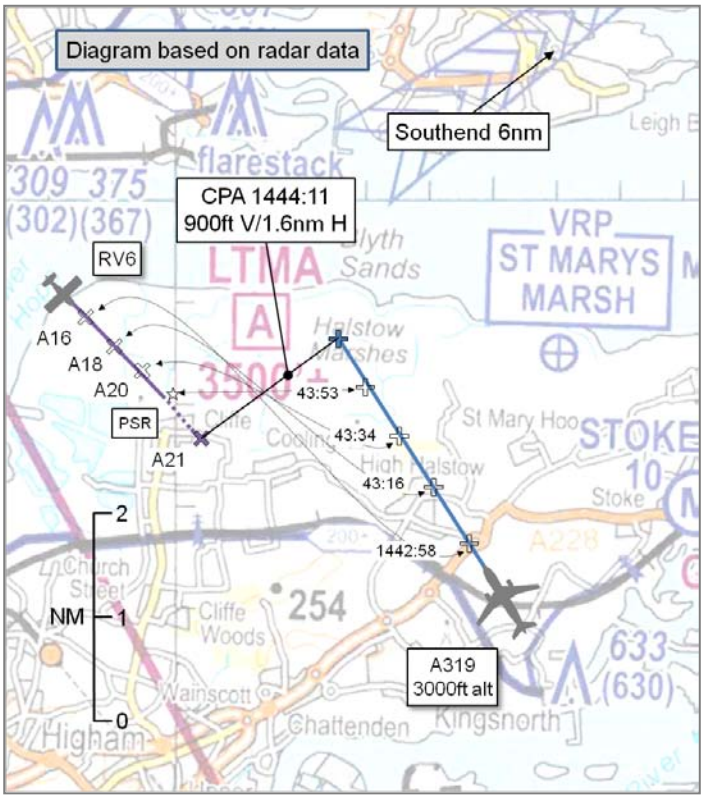
Date/Time: 1 May 2013 1444Z

Position: 5128N 00032E (9nm SW Southend)

Airspace: Lon FIR (*Class: G*)

Reporter: Southend APR

	1st Ac	*2nd Ac*
Type:	A319	RV6
Operator:	CAT	Civ Pte
Alt/FL:	3000ft QNH (NK)	1400ft↑ QNH (1022hPa)
Weather:	VMC CLOC	VMC CAVOK
Visibility:	10km	15-20nm
Reported Separation:	1000ft V/3nm H	600ft V/4nm H
Recorded Separation:	900ft V/1·6nm H	



CONTROLLER REPORTED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE SOUTHEND APR reports that the A319 was inbound via DET; he coordinated a heading of 330° with Thames Radar and requested altitude 4000ft. Thames stated that 4000ft was not available and that the A319 would be transferred at 3000ft. Shortly afterwards, traffic appeared out of Damyns Hall, he thought, on a squawk of 1177 [London Information conspicuity code] tracking SE indicating 1700ft. He observed the A319 turning and tried calling Thames Radar to amend the clearance. Thames did not answer for about 30sec and when they did he asked if they were still working the A319 flight but the response was no. Throughout this process he made blind calls to both the A319 flight and the unknown traffic. When the A319 flight called he gave an avoiding action R turn onto a heading of 360° before passing TI on the unknown traffic and informing the crew that it was a reduced DS. He turned the A319 flight onto heading 030° away from the unknown contact, descended the flight to 1500ft and cleared it for the ILS RW06. He estimated separation as 1300ft and 2.5nm.

THE A319 PILOT reports inbound to Southend, IFR and in receipt of a DS from Southend [130·775MHz] squawking an assigned code with Modes S and C. They were subject to a very late handover from Thames Radar to Southend which appeared to be due to the workload of the Thames Radar controller. He prompted Thames for handover owing to their proximity to Southend RW06 FAT as they were high for the approach based on DME distance to run. On handover, about 6nm from RW06 threshold at 3000ft and 170kt, Southend APR gave them avoiding action on traffic which they had on TCAS; the traffic was never closer than 1000ft below and did not become 'proximate' traffic, let alone a TCAS TA. He assessed the risk as Low, there being no impact on their operation. He later spoke to the Tower controller to obtain more information as ATC were going to file an Airprox report as 'deconfliction minima' had been breached. He explained to ATC that this particular incident had been a non-event and asked ATC if he should file a report since there had been no TCAS RA. No report was filed initially but this report was later completed when requested.

THE RV6 PILOT reports en-route to France, VFR and in communication with London Information [124·600MHz] and then Southend [130·775MHz] squawking 1177 with Mode C. The visibility was

15-20nm in CAVOK, VMC and the ac was coloured red/white; ac lighting was not reported. He departed Thurrock at 1440 squawking 1177 and called London Information to activate his FPL to France. His initial track was 136° to Folkestone at no more than 2000ft and he confirmed with London that he was squawking 1177 and requested to call Southend. Climbing through altitude 1400ft [QNH 1022hPa] at 140kt he saw a transport ac about 4nm away and 600ft above turning R away from his ac. He thought the ac was joining the GP to land on RW06 at Southend. He assessed the risk as None, believing that this incident did not constitute an Airprox. He opined that the occasion for conflict in this area was limited to Southend using RW06 and that the practice of vectoring CAT traffic into uncontrolled airspace at comparatively low levels was the most important factor. This situation could be alleviated by ATC maintaining the traffic at a higher altitude whilst it joined the extended C/L for RW06. He expressed concern with the revival/expansion of Southend which could be to the detriment of GA operations to the E of London/City. Consideration should be given to maintaining a corridor of uncontrolled airspace between London/City and Southend for the safe passage of light ac flying VFR between the Midlands or East Anglia to the SE of England and to France; little consideration appears to be given to the intense M/Light activity nearby and to the many non-radio ac that operate quite legitimately locally.

ATSI reports the Airprox was reported by the Southend APR to have occurred at 1443:58 UTC, 8.2nm to the SW of Southend A/D, within Class G uncontrolled airspace, between an Airbus A319 and a Vans RV6.

Background

The A319 was operating under IFR, inbound to Southend and was in receipt of a RCS from London Control (Thames RAD) [132.700MHz] and descending below the base of CAS (3500ft) prior to being transferred to Southend APR [130.775MHz].

The RV6 was operating under VFR on a flight from Thurrock to Berck Sur Mer (LFAM) and was in receipt of a BS from London Information [124.600MHz]. For co-ordination between the two units, the Southend MATS Part 2, paragraph 4.3.5 states:

> 'If Southend Approach control is unable to give an acceptance level below controlled airspace, the relevant TC sectors are to co-ordinate between each other so that they are all aware of the situation, and the potential need to hold at SPEAR. The lowest level available to LTCC in the SPEAR holding pattern is 4000ft ALT.
>
> Thames Radar will work airways inbounds to Southend from the south (unless they have no traffic to effect), before transferring to Southend Approach, preferably before DET [Detling – VOR].'

LTC MATS Part 2, Page THS 8.1 states:

> '…Thames are encouraged to release the aircraft to Southend at the earliest opportunity and clear the aircraft to leave CAS in accordance with the release prior to DET. Should Southend APC be unable to offer an acceptance level outside of CAS, Thames must co-ordinate with TC SE Low and TC NE before holding at SPEAR...'

The RV6 pilot contacted London Information after departure from Thurrock in order to activate his FPL. The UK AIP page ENR 1-10-3, paragraph 1.9.2 states:

> 'Where there is no ATSU at the departure aerodrome, the pilot is responsible for ensuring that the **departure time** is passed to the Parent AFTN Unit or AFPEx Helpdesk, so as to activate the FPL and to enable the DEP message to be sent to the appropriate addressees. Arrangements should be made for a 'responsible person' on the ground to telephone the departure time to the Helpdesk. Failure to pass the departure time will result in the FPL remaining inactive. Consequently, this could result in the destination aerodrome not being aware that the aircraft is airborne and any necessary alerting action may not then be taken.'

Paragraph 1.9.3 states:

> 'Exceptionally, the Flight Information Region (FIR) controller [FISO] at the ACC will accept departure times on RTF from pilots who have departed from aerodromes where there is no ATSU, or it is outside the hours of operation. The pilot is to request the controller [FISO] to pass the departure time to the AFPEx Helpdesk. However, controller [FISO] workload may cause a delay in forwarding such departure messages.'

CAA ATSI had access to RTF recordings of Southend APR, Thames RAD and London Information frequencies, together with area radar recording and written reports from the RV6 pilot, the London Information FISO, the Southend Radar controller, Thames Radar controller and Southend ATSU. The workload of the Thames RAD and Southend APR was considered to be medium to heavy. The Southend Airport weather was recorded as follows:
METAR EGMC 011420Z 09012KT 9999 FEW040 14/01 Q1022=

Factual History

At 1439:25, the A319 pilot contacted Thames RAD in the descent to altitude 4000ft, inbound to DET, squawking 5525. The A319 pilot was instructed to take up a radar heading of 010°. At 1440:18, the Thames RAD passed inbound details to the Southend APR regarding the A319. The Southend APR gave a radar heading of 330° and an acceptance level of 4000ft. The Thames RAD was unable to agree to 4000ft due to conflicting traffic and both controllers agreed a clearance of 3000ft. The RV6 departed from Thurrock and first appeared on radar at 1440:27, squawking 1177 (FIS), passing an altitude of 200ft (see Figure 1).

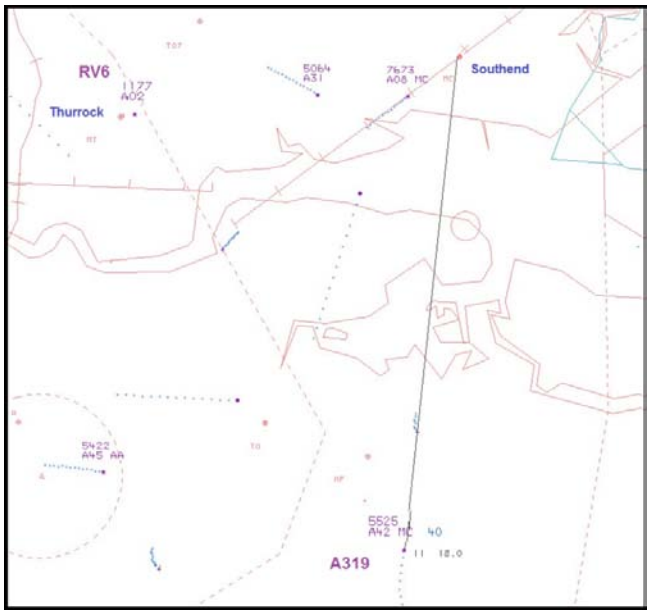


Figure 1: MRT at 1440:27

At 1440:54, the A319 passed 1.7nm E of DET at an altitude of 4000ft. At 1441:37, the Thames RAD instructed the A319 pilot to turn L onto a heading of 330° and gave descent to 3000ft. This was acknowledged correctly by the A319 pilot. Radar showed the A319 3.2nm NE of DET indicating an altitude of 3900ft.

At 1441:40 Southend APR contacted London Information requesting information on the 1177 (FIS) squawk, 10nm SW of Southend. London Information reported that the ac was not on their frequency. At 1442:05 Southend APR contacted Thames RAD and commented, *"..it's OK I see you've turned him now thanks"*. At 1442:28, radar showed the A319 passing 3500ft and leaving the base of CAS at a range of 10.7nm from Southend (see Figure 2).

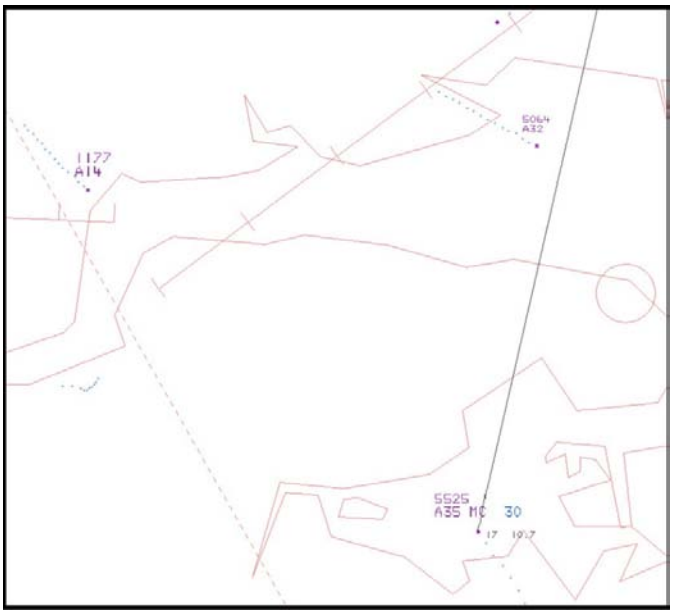


Figure 2: MRT at 1442:28

The Southend APR was concerned that the A319 pilot had not called and at 1442:42 he transmitted to the A319 in case the aircraft was listening-out on frequency. Meanwhile the RV6 pilot established two-way communication with London Information, *"*[RV6 C/S] *is an RV six airborne four one out of Thurrock for Lima Fox Alpha Mike er we'll be flying two thousand feet direct to just east of Folkestone and if you could activate my flight plan it would be nice"*. London Information agreed a BS and it was confirmed that the RV6 pilot had been squawking 1177 since departing from Thurrock.

At 1442:53 the Southend APR initiated a telephone call to Thames RAD in an attempt to amend the clearance for the A319, due to the unknown ac [the RV6]. However the telephone was not immediately answered and at 1443:07 he again transmitted to the A319 pilot to see if he was listening-out. The Thames controller's written report indicated that at this point he had been involved in a lengthy and complicated call with LTC (NE). Simultaneously the Southend APR transmitted to the unknown ac [the RV6], *"Station SE bound southwest of er Southend by ten miles are you monitoring this frequency"*. At this point Thames RAD answered the telephone call from Southend APR and confirmed that the A319 had been transferred, but reported that he would try again. The Southend APR again transmitted to the A319. Meanwhile, the Thames RAD recognised that the A319 was still on his frequency and at 1443:38, he transferred the A319 to Southend, *"*[A319 C/S] *Southend one three zero seven seven five",* which was acknowledged correctly by the A319 pilot.

London Information instructed the RV6 pilot to squawk 7000 and to contact Southend APR regarding traffic in the area. The RV6 pilot reported having the traffic in sight. At 1443:42, the A319 pilot called Southend APR (see Figure 3), *"…hello* [A319 C/S] *maintaining three thousand feet one zero two two heading three three zero A319 with romeo"*. The Southend APR immediately gave avoiding action and, because he was unable to provide the deconfliction minima, elected to provide a reduced deconfliction service, *"*[A319 C/S] *avoiding action turn right heading three six zero degrees".* The A319 pilot responded, "*Heading north three six zero* [A319 C/S]". The Southend APR then advised, "[A319 C/S] *a reduced deconfliction service you've got unknown traffic left nine o'clock at two miles southeast bound last indicating two thousand feet in the FIR"*. This was acknowledged by the A319 pilot, descending through 3000ft and 2.9nm ESE of the RV6, indicating 2000ft.

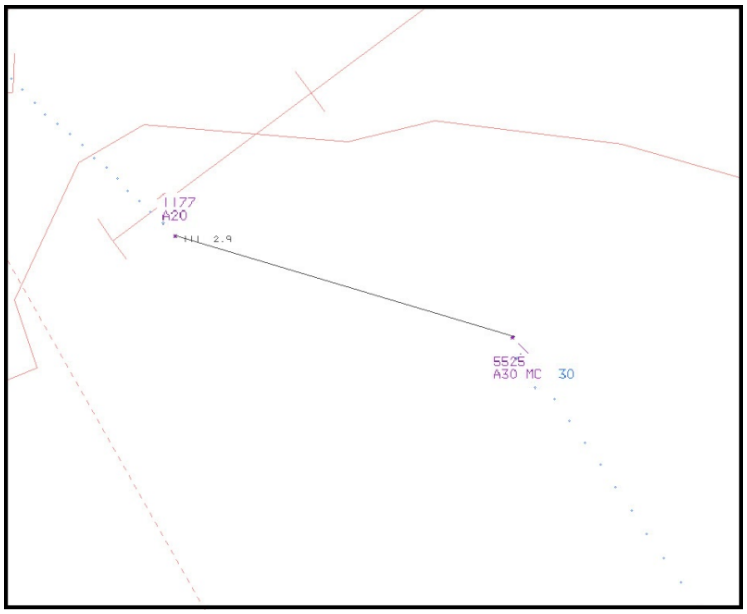


Figure 3: MRT at 1443:42

The RV6 SSR was lost for two sweeps as the RV6 pilot changed code to 7000. At 1444:12, as the A319 pilot commenced the R turn, the two ac passed abeam at a range of 1.7nm (CPA) and at a vertical distance of 800ft (see Figure 4).

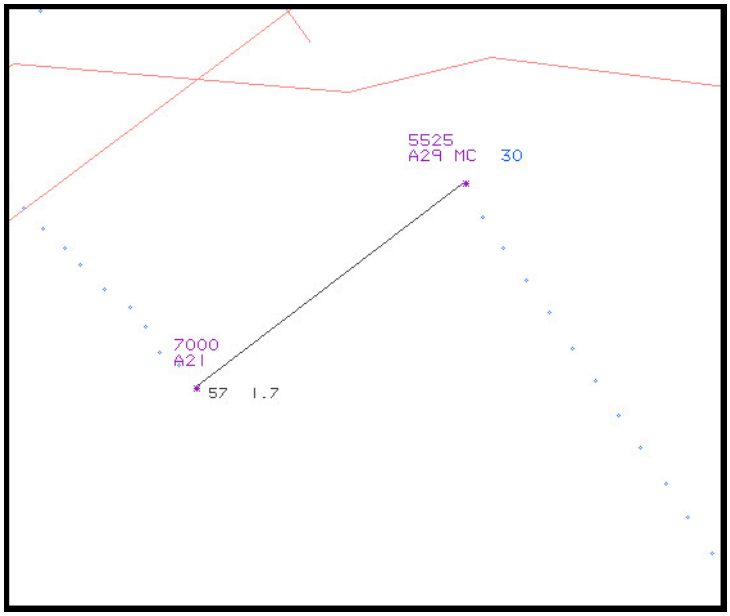


Figure 4: MRT at 1444:12

At 1445:09 the RV6 pilot contacted Southend APR reporting that he had previously sighted the commercial traffic and had called London Information to activate his flight plan. The Southend APR suggested that when departing Thurrock, it would be better to call Southend Radar first. The Southend APR also confirmed that in such circumstances Southend would be able to activate the pilot's flight plan. The A319 was then vectored for the ILS RW06 and landed without further incident.

The ATSU report indicated that Thurrock Airfield had been asked to remind pilots operating near Southend to make contact with Southend APR. Further work and consultation is ongoing with CAA and NATS regarding airspace changes and procedures for the transfer of traffic.

Analysis

A number of factors contributed to the Airprox: the initial level of 4000ft suggested by Southend APR was unavailable and resulted in an agreement of 3000ft and a radar heading of 330°. The RV6 pilot operating outside CAS was not part of the Southend APR picture when coordination was agreed. The RV6 pilot, mindful of the requirement to activate his FPL, squawked 1177 (FIS) on departure from Thurrock prior to contacting London Information. This indicated to Southend APR that the RV6 pilot was talking to London Information, when at the time this was not the case.

The Thames RAD was distracted by an operational telephone call which resulted in the late transfer of the A319, delayed the Thames RAD answering the Southend controller's call when attempting to resolve the potential conflict and also likely led to the Thames RAD's incorrect assumption that the A319 pilot had already been transferred.

Thames RAD normally transfer inbound ac in the vicinity of DET, just prior to, or on leaving CAS. Outside CAS the A319 pilot would very likely have received a BS from Thames RAD. The A319 pilot was not advised that he was leaving CAS; however, it was likely that he was aware that the base of CAS in the area was 3500ft and of the potential for unknown ac in the area. MATS Part 1, Section 1, Chapter 5, Page 1, paragraph 1.2.2 states:

'Pilots must be advised if a service commences, terminates or changes when:

…leaving controlled airspace…'

CAP774 UK Flight Information Services, Chapter 1, page 1, paragraph 2: states:

'Within Class F and G airspace, regardless of the service being provided, pilots are ultimately responsible for collision avoidance and terrain clearance, and they should consider service provision to be constrained by the unpredictable nature of this environment.'

The Southend APR recognised the need to resolve the situation and attempted to contact both ac, telephoning London Information and Thames RAD. As soon as the A319 came on frequency the Southend APR gave immediate avoiding action to resolve the situation. The distance between the two ac was already less than the required minima for a DS; therefore a reduced DS was agreed. CAP 774 UK Flight Information Services, Chapter 4, page 1, paragraph 6: states:

'…The deconfliction minima against uncoordinated traffic are:

5 NM laterally (subject to surveillance capability and regulatory approval); or 3,000 ft vertically and, unless the SSR code indicates that the Mode C data has been verified, the surveillance returns, however presented, should not merge…'

'…Furthermore, unknown aircraft may make unpredictable or high-energy manoeuvres. Consequently, it is recognised that controllers cannot guarantee to achieve these deconfliction minima…'

Conclusions

The Airprox occurred when the Southend APR became concerned that the safety of the A319 could have been compromised. The RV6 and A319 flew into proximity in Class G uncontrolled airspace and the Southend APR was not in communication with either ac.

The Southend APR became aware of the potential conflict and attempted to resolve the situation by trying to establish communication with both pilots and by telephoning both London Information and Thames RAD. As soon as the A319 came on frequency the Southend APR immediately gave avoiding action to resolve the situation.

The delayed transfer of the A319 to Southend APR was a contributory factor caused by the lengthy operational telephone call and most likely led to the Thames RAD forgetting to advise the A319 pilot

that he was leaving CAS and his mistaken assumption that the A319 had already been transferred. The late transfer of the A319 delayed the appropriate and timely provision of a DS that would have been facilitated by Southend APR.

[UKAB Note(1): The UK AIP ENR Part 1.6 (ATS Surveillance Services And Procedures), Section 2 (SSR OPERATING PROCEDURES) paragraph 2.2.2.2.1 states:

'In addition to Special Purpose Codes and the General Conspicuity Codes detailed above, there are a number of other conspicuity codes in the UK SSR Code Allocation Plan, as detailed in the table at paragraph 2.6 of ENR 1.6. For ease of reference, those not specific to particular locations or ATS Units are listed in the table below:

Code	Use	Conditions/Remarks
…		
*1177	London AC (Swanwick) FIS	Aircraft in receipt of a Basic Service from London Information. Shall only be selected with ATC direction.
…		

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PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

The Board first considered the RV6 pilot's actions. It was agreed that his flight was properly planned and executed, with the exception of his use of the London Information Mode A 'conspicuity code' of 1177 before being instructed to do so by ATC . The selection of this code from T/O resulted in the Southend APR contacting London Information needlessly, which then delayed his call to Thames RAD. When the Southend APR did call Thames, the Thames controller was engaged in a lengthy call with LTC (NE) and there was a delay before the Southend APR was able to prompt Thames to transfer the A319 to the Southend frequency. An ATC Member pointed out that Southend APR could have taken this opportunity to request Thames RAD pass avoiding action to the A319 pilot before transferring him. Some Members opined that the RV6 pilot would have been better served by contacting Southend APR initially, who may also have been able to activate his FPL, workload permitting. If workload did not allow FPL activation the Southend Controller could easily effect coordination with his other traffic and then clear the pilot to contact London Information for FPL activation. Other Members expressed the opinion that it would be helpful to contact London Information in the first instance. In either case, the CAA policy advisor reiterated the advice to pilots of ac transiting the area to contact Southend before closing to within 10nm of the A/D. Notwithstanding the sequence of events, both pilots were operating in class G airspace and had an equal responsibility to 'see and avoid', which the RV6 pilot did.

Members then considered the sequence of events pertaining to the A319 pilot's transfer from Thames RAD to Southend APR. The controllers had agreed a release level of 3000ft, however, it appeared that the Thames RAD was then distracted by a protracted telephone conversation to another agency that resulted in him not transferring the A319 pilot to the Southend APR RTF. The Southend APR could see the developing situation on his radar display and made a concerted effort

to bring his control to bear, including blind calls to the parties involved. The Board commended him for his professionalism.

Despite the Southend APR applying his best efforts, he was unable to provide timely avoiding action and deconfliction minima were eroded; however, Board Members emphasised that the regulations covering provision of a DS stated that minima against uncoordinated traffic may not be achievable. Since the RV6 pilot was visual with the A319 and the A319 crew had good SA on the RV6 from their TCAS, Members were content that there were robust safety barriers in place and hence no risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause:	The late transfer of the A319 to Southend APR prevented the timely application of a DS.
Degree of Risk:	C.
ERC Score:	50.