

AIRPROX REPORT No 2014132

Date/Time: 5 Aug 2014 1628Z

Position: 5041N 00206W
(Wareham)

Airspace: LFA 2 (Class: G)
London FIR

Aircraft 1 Aircraft 2

Type: AW159 Wildcat PA28

Operator: RN Civ Pte

Alt/FL: 1200ft NK
RPS (1010hPa)

Conditions: VMC VMC

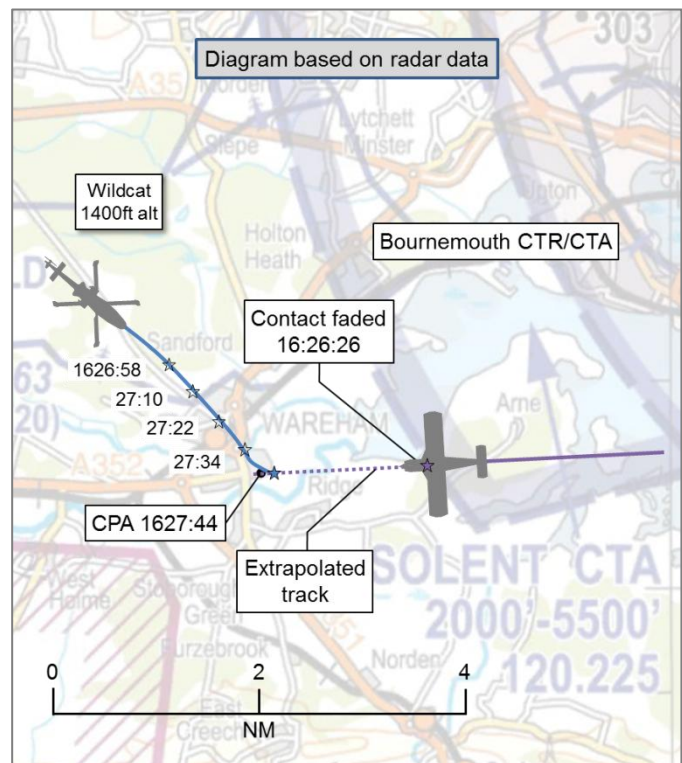
Visibility: 20km 10km

Reported Separation:

20ft V/75yd H 0ft V/200m H

Recorded Separation:

NK



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE WILDCAT PILOT reports in straight and level cruise, about 1nm southeast of Wareham. The grey camouflaged helicopter had upper and lower white anti-collision lights selected on, as was the SSR transponder with Modes A, C and S. The aircraft was not fitted with an ACAS or TAS. The pilot, sitting in the right-hand seat, was operating under VFR in VMC, in receipt of a Basic Service from Yeovilton Approach and assisted by an Observer seated in the left-hand seat. Whilst heading 140° at 120kt, he saw a white and orange Piper PA28 in the left 11 o'clock, estimated to be 20ft below and 100yd ahead, crossing left to right. The aircraft had appeared from behind a blind spot caused by the windscreen central pillar. He made a note of the aircraft's registration as he turned left through about 30° in order to avoid it. The other aircraft maintained course and speed; it's crew did not appear to have sighted the helicopter. The Wildcat pilot filed an Airprox with Yeovilton Air Traffic over the radio. The pilot commented that the Observer was under a high workload and that this may have limited his lookout.

He assessed the risk of collision as 'High'.

THE PA28 PILOT reports in straight and level cruise, tracking westbound along the coast, in the Bridport area. The Orange and white aircraft's lighting state was not reported. The SSR transponder was selected on with Mode A only, he recalled¹. The pilot was operating under VFR in VMC, in receipt of a Basic Service from Yeovil Radar, he reported². He suddenly noticed a Lynx helicopter approaching from the right-hand side in the 3 o'clock position, at the same level, at very close range and travelling at speed. He was unable to decide on 'adequate avoiding action' in time; an effort was made to accelerate out of the other aircraft's flight path and allow it to pass behind, which it did.

He assessed the risk of collision as 'Medium'.

THE YEOVILTON APPROACH CONTROLLER reports the Wildcat pilot departed Yeovilton MATZ and called him on Yeovilton Approach for a Basic Service. He was en route to Durston Head to coast-out for operational activity in the South Coast Danger Areas. He reported transiting at 1500ft on the

¹ The radar replay indicated Mode C derived altitude until the contact faded at 1626:26.

² Actually a Basic Service from Bournemouth Radar

Portland regional 1010hPa. The controller reminded the pilot that Portland Radar was unserviceable and that there would be no radar coverage at low-level over the sea. As the Wildcat pilot was flying close to Bournemouth airspace, the controller suggested he contact Bournemouth as he transited past and then recall the controller when coasting-out at Durston Head. The pilot reported that he would stay clear of Bournemouth's airspace and would re-contact the controller. The controller lost radar contact as the Wildcat was transiting north to south past the western edge of Bournemouth's airspace. At [1628], the Wildcat pilot reported an Airprox. He reported that a PA28 had passed 20ft underneath and 100yd away from him, just southeast of Wareham. Because he had no Portland radar, the controller could not see the Wildcat or any other contacts on his radar display.

THE YEOVILTON SUPERVISOR reports that the Approach controller reported the Wildcat pilot had called an Airprox with a light civilian fixed wing aircraft at 1728L. The incident was reported in the vicinity of Wareham, which was below the limits of available surveillance radar cover. Bournemouth were immediately contacted to ascertain if the other aircraft was in receipt of an Air Traffic Service from them. The Bournemouth controller confirmed the callsign and stated that its pilot was in receipt of a Basic Service at the time of the incident. DSATCO was informed immediately and the controller was relieved in order to record his account of the incident.

THE BOURNEMOUTH CONTROLLER: In the course of their occurrence investigation, Yeovilton contacted Bournemouth ATC and were told that the PA28 pilot was in receipt of a Basic Service from Bournemouth at the time of the Airprox, that both aircraft were displayed on the controller's radar screen, and that the PA28 pilot had been passed Traffic Information on the Wildcat. Bournemouth reported that the PA28 pilot did not raise any concern.

Factual Background

The weather at Bournemouth was recorded as follows:

METAR EGGH 051620Z 20010KT 9999 FEW016 SCT032 20/16 Q1016

Analysis and Investigation

CAA ATSI

The PA28 pilot departed from Bournemouth and left the CTR tracking west. At 1623:01, the PA28 was 6.9nm east of Wareham, squawking 7000 and indicating FL015. The Wildcat was 8.7nm northwest of Wareham squawking 7420, see Figure 1.

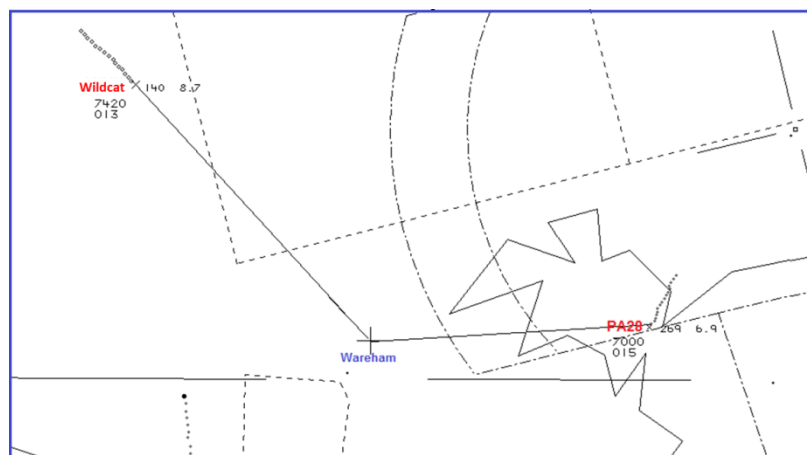


Figure 1: Swanwick MRT at 1623:01

No RTF was available for Bournemouth and the ATSU had indicated that the PA28 was in an area of poor radar coverage and its pilot had not mentioned an Airprox whilst on their frequency.

At 1626:02, the PA28's SSR code changed to 0000, which was considered to be due to poor radar performance because, shortly after, at 1426:26, the PA28 faded from radar, 2.1nm east of Wareham indicating FL014. The Wildcat was at FL013, see Figure 2.

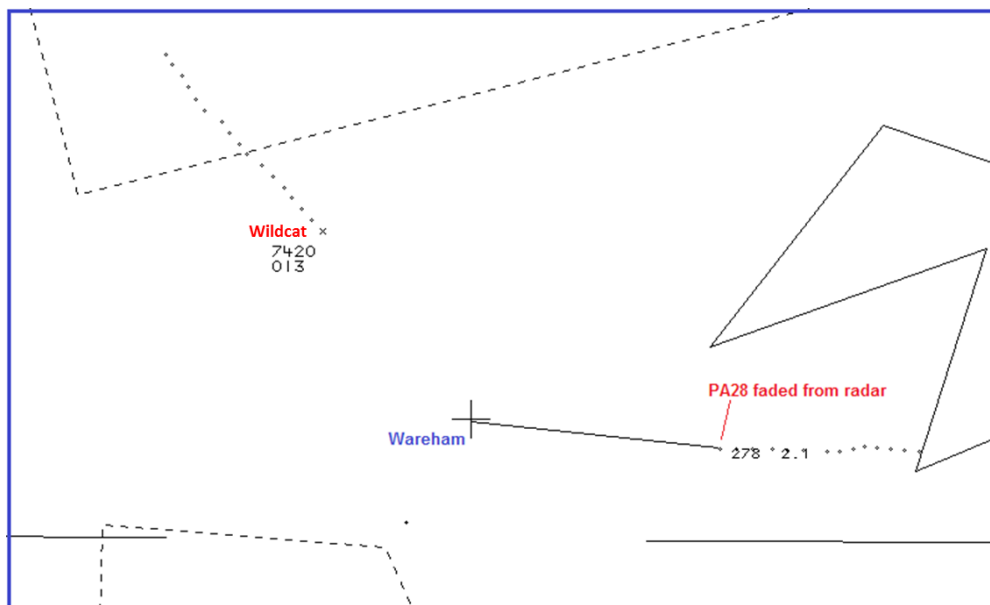


Figure 2: Swanwick MRT at 1626:26

At 1627:34, the Wildcat passed 0.2nm east of Wareham. The Wildcat pilot's written report indicated that when 1nm southeast of Wareham he sighted the PA28 to his left and made a left turn to avoid. At 1627:46, the Wildcat (at FL013) is shown in a left turn 0.6nm southeast of Wareham, see Figure 3.

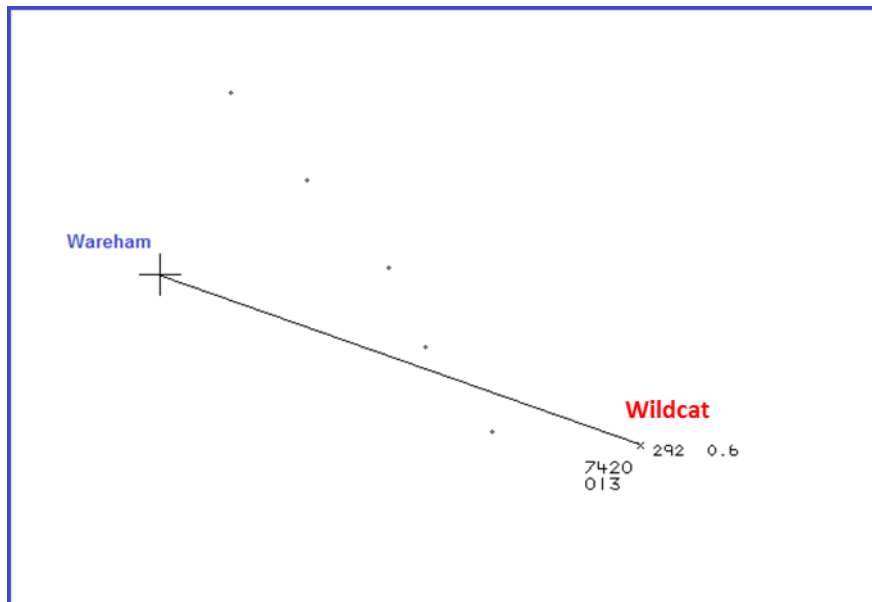


Figure 3: Swanwick MRT at 1627:46

It was not possible to show the exact geometry of two aircraft in proximity. At 1628:43, the PA28 reappeared on radar 1.4nm west-southwest of Wareham at FL012. At 1629:15, Figure 4 shows a line projected from the point when the PA28 faded from radar to the point when it reappeared.

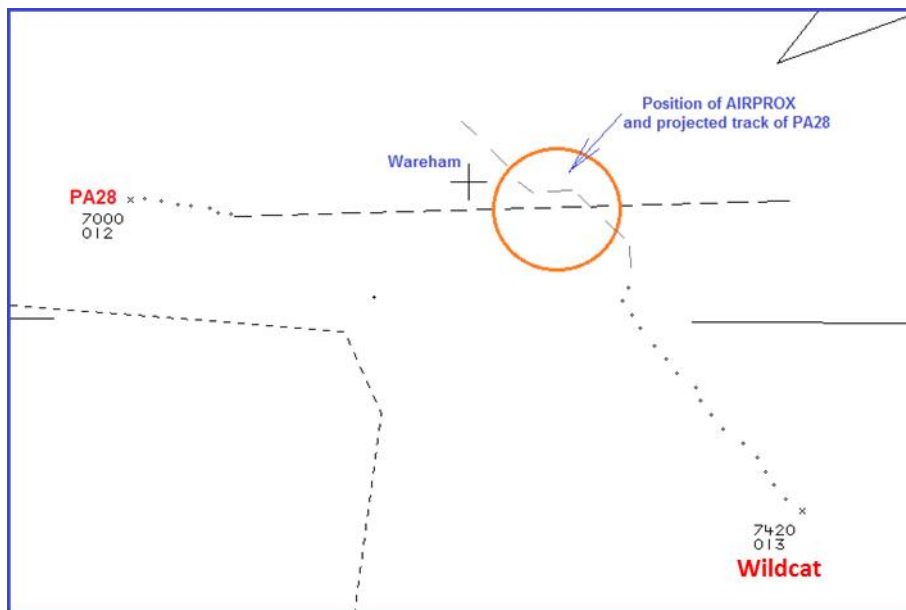


Figure 4 - Swanwick MRT at 1629:15

Military ATM

The Airprox occurred between a Wildcat pilot under a Basic Service with Yeovilton and a PA28 pilot under a Basic Service with Bournemouth. The PA28 faded from radar 2min prior to the reported Airprox; the radar used for the investigation was not the one available to the Yeovilton or Bournemouth controllers.

The radar replay did not capture the incident but the aircraft were on a converging geometry at 1625:52, see Figure 1.

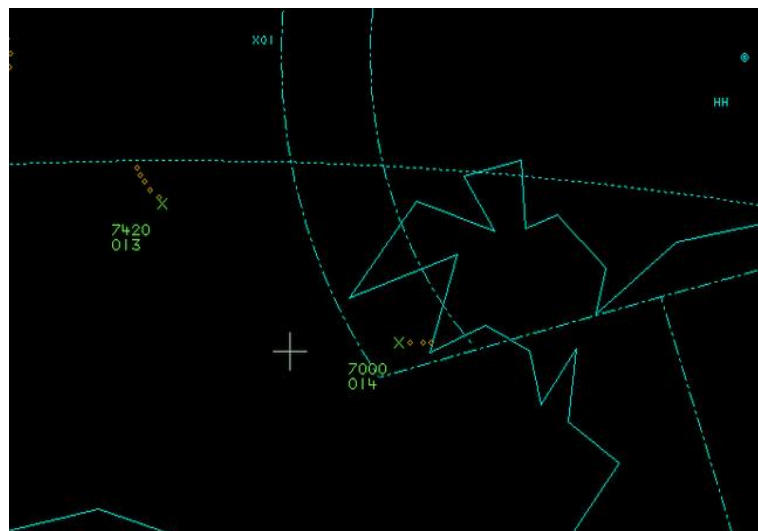


Figure 1: Geometry at 1625:52 (Wildcat squawk 7420; PA28 squawk 7000)

At 1627:34, the Yeovilton controller transmitted, “*radar contact lost, report feet wet.*” The CPA is believed to be at 1627:56, as the Wildcat takes a sudden left turn, see Figure 2.

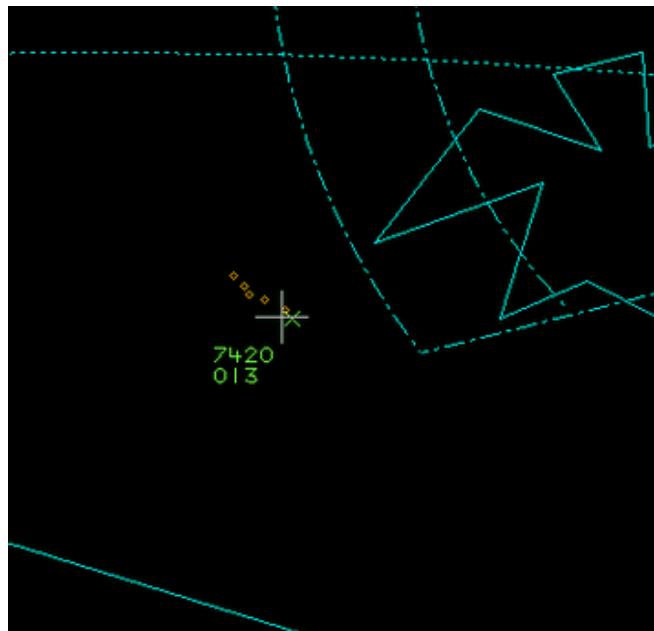


Figure 2: CPA believed to be at 1627:56

At 1628:00, the Wildcat pilot reported an Airprox; the details were passed as, *“I’ve just had an Airprox with a PA28 just to the south east of Wareham, 1200 feet, believe the callsign to be [PA28 callsign] was closing from my bearing from my left, about 20 feet below and about 100 yards in front of me.”* The PA28 was detected again on radar replay at 1628:44, see Figure 3.

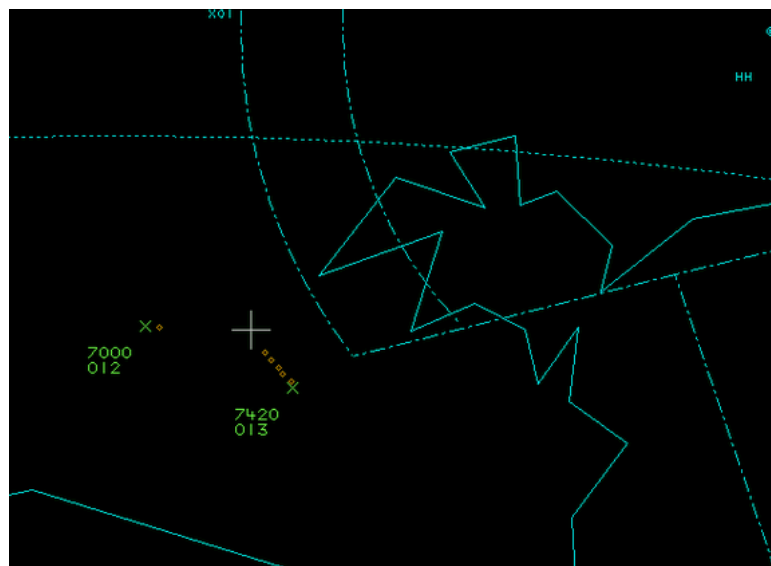


Figure 3: Geometry at 1628:44

The controller had confirmed to the crew that the Portland Radar was unavailable and Plymouth was closed. In addition, the controller stated that Bournemouth were available to provide a transit service, prior to returning to Yeovilton’s frequency, when over the sea. As the Wildcat would remain clear of Bournemouth, the captain elected to remain with Yeovilton. The Wildcat pilot was under a Basic Service below Yeovilton radar cover and this meant that the barrier of Traffic Information was not available; both aircraft were painting on the Bournemouth Radar and it was reported that Bournemouth had called traffic to the PA28 pilot. Neither aircraft had ACAS fitted. Lookout was the key barrier to avoiding other aircraft; the high workload of the pilot in the Wildcat LHS and the width of the windscreen pillar contributed to a late spot on the PA28, which was converging from the left. The PA28 pilot’s lookout was such that as the Wildcat was spotted, there was very little time to react and due to the closing geometry, the pilot felt that maintaining heading would allow the Wildcat to pass behind. The Yeovilton Local Investigation highlighted the barriers that were partial or absent. The investigation observed that the windscreen strut on the Wildcat is

slightly wider than the Lynx and that more head movement was required to obtain a more comprehensive scan. It was also recognised that all available resources should be utilised in assisting the crews in maintaining safe separation.

UKAB Secretariat

The Wildcat and PA28 pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision³. If the incident geometry is considered as converging then the PA28 pilot was required to give way to the Wildcat⁴.

Comments

Navy HQ

Yeovilton ATC suggested that the Wildcat crew should call Bournemouth for the transit, which was rebuffed by the Wildcat crew as they were remaining clear of Bournemouth. Bournemouth held both aircraft on radar and offered Traffic Information (TI) on the Wildcat to the PA28 pilot. Had this TI been assimilated then this should have improved the PA28 pilot's SA; it is not clear if the PA28 pilot heard the TI as there was no acknowledgment. The fact that the pilot 'suddenly noticed a Lynx helicopter' (the Wildcat) suggests that the TI was not assimilated. Both pilots were operating under VFR in receipt of a Basic Service where see and avoid is the ultimate mitigation against mid-air collision; Bournemouth attempted to add another barrier by offering TI, nevertheless, it was the Wildcat pilot's late sighting and subsequent avoiding action that resolved the conflict, with the GA pilot's resolution being to increase speed.

Summary

An Airprox was reported when an Agusta Westland AW159 Wildcat and a Piper PA28 flew into proximity at 1628 on Tuesday 5th August 2014. Both pilots were operating under VFR in VMC and in receipt of a Basic Service, the Wildcat pilot from Yeovilton and the PA28 pilot from Bournemouth.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings, reports from the military air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board first considered the PA28 pilot's actions. He had been in receipt of a Basic Service from Bournemouth Radar and had reportedly been passed Traffic Information on the Wildcat. Board members felt that the PA28 pilot had probably not assimilated the Traffic Information call and that his subsequent sighting of the Wildcat was later than could have been expected, given the weather conditions. He reported the Wildcat 'suddenly appearing' in his right 3 o'clock at close range and at the same level. The Board agreed that he could not have altered the outcome of the Airprox at that stage, and that therefore his was effectively a non-sighting; this reinforced the importance of an effective lookout, such that earlier avoiding action could be made. Although he took the only avoiding action that he felt he was able to make, Board members agreed that the acceleration of a PA28 was such that it would not make a material difference in the time available.

The Wildcat pilot was in receipt of a Basic Service from Yeovilton Approach and had not received Traffic Information on the PA28 due to their lack of radar coverage. Members noted that the Wildcat pilot had been offered a handover to Bournemouth as his aircraft reached the limit of Yeovilton's available surveillance coverage. Although the crew were no doubt occupied with their impending entry to the South Coast Danger Areas and task therein, members agreed that they would have been better served by accepting this suggestion and benefiting from the subsequent surveillance coverage

³ Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

⁴ *ibid.*, Rule 9 (Converging).

from Bournemouth. Given that the PA28 pilot, under a Basic Service, had been given Traffic Information on the Wildcat, the Board felt that it would have been likely that the Wildcat pilot would also have been given Traffic Information on the PA28, even if under a Basic Service, and that this RT exchange would have probably contributed significantly to an earlier visual sighting by both pilots. Members agreed that this lost opportunity had been a contributory factor. In the event, the Wildcat Observer, seated on the left hand side, did not see the PA28 approaching from the left, and the pilot saw it only at a late stage, although with sufficient time to note the other aircraft's registration as he took avoiding action. The Board agreed that the late sighting by the Wildcat pilot and effective a non-sighting by the PA28 pilot were the cause of the incident.

With regard to risk, members agreed that, although avoiding action had been taken to successfully prevent a collision, safety margins had been much reduced below normal. Members also noted that the newly in-service Wildcat was not fitted with a TAS and expressed their surprise. A TAS represented a barrier to mid-air collision which would probably have resolved this event without incident.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	A late sighting by the Wildcat pilot and effectively a non-sighting by the PA28 pilot.
<u>Contributory Factor:</u>	The Wildcat pilot declined a service from Bournemouth.
<u>Degree of Risk:</u>	B.
<u>ERC Score⁵:</u>	20.

⁵ Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.