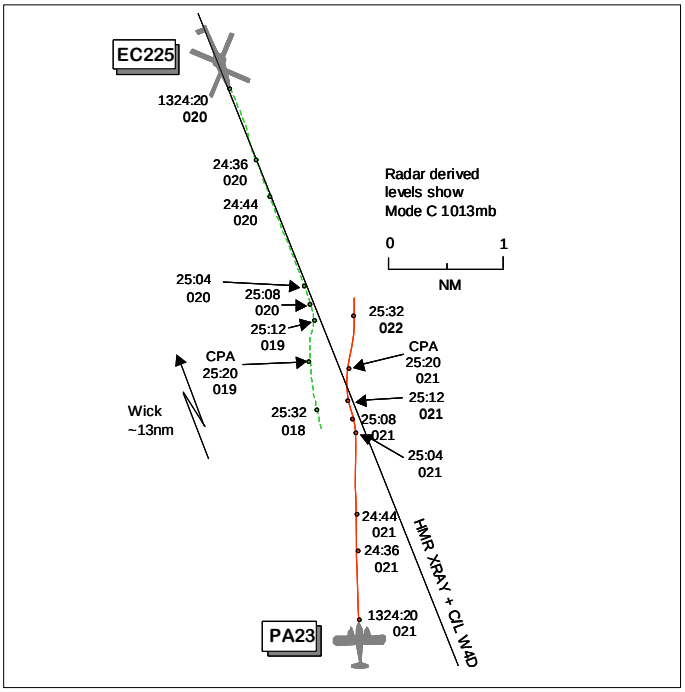
AIRPROX REPORT No 2010114

Date/Time:	26 Aug 2010 1325Z	
Position:	5816N 00257W (13nm SSE Wick)	
Airspace:	SFIR	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	EC225	PA23
Operator:	CAT	Civ Comm
Alt/FL:	2000ft (QNH 1012mb)	2000ft (QNH 1012mb)
Weather:	VMC CAVOK	VMC CLNC
Visibility:	>10km	45km
Reported Separation:	Nil V/0·5nm H	500ft V/2nm H
Recorded Separation:	200ft V/0·3nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE EC225 PILOT reports en-route to Aberdeen VFR and in receipt of a BS from Wick on 119·7MHz, squawking 3730 with Modes S and C; TCAS 1 was fitted. The visibility was >10km in CAVOK VMC and the ac was coloured red with nav, strobe and floodlights all switched on. In the cruise S of Wick, approaching the Wick 10nm handover point at 2000ft QNH 1012mb, heading 165° at 145kt they noticed and were monitoring an ACAS contact at a similar level. They were aware of a survey ac operating low level, not above 600ft, [not the subject PA23] in the vicinity of Beatrice Platform however, there was no ACAS indication for this ac in that area. At 10nm P1 contacted the survey ac on Comm Box 1 (122·8MHz) to pass information on position and intention whilst P2 reported '10nm S of Wick' on Comm Box 2 to Wick and was told to contact Lossie Departures on 119·35MHz. On contacting Lossie, ACAS generated a TA target and aural 'traffic' alert, simultaneously as both crewmembers became visual with an ac in their 12 o'clock range <1nm at a similar level flying in the opposite direction. P1 took avoiding action by turning R and descending whilst P2 asked Lossie to standby. As the other ac passed down their LHS about 0·5nm away they identified it as a white/blue coloured twin-engine Piper type. On subsequent communication with Lossie this was identified to them by c/s and Lossie were informed of their intention to file an Airprox. He assessed the risk as high.

THE PA23 PILOT reports conducting a wildlife survey in the Moray Firth at 2000ft alongside other company traffic conducting a similar survey at 600ft. He was receiving a BS from Lossie on frequency 119·35MHz and squawking 3721 with Modes S and C. The visibility was 45km in VMC and the ac was coloured white/blue with strobe and landing lights switched on. Prior to the flight faxes were sent informing various stations of their intentions that 2 ac would be operating in this particular area giving levels and times on survey. About 1325 when 5-8nm N of Beatrice HPZ, heading 360° at 130kt, Lossie passed TI on conflicting traffic 11 o'clock range 5nm. He responded 'visual' and he adjusted his heading R 5° to ensure the ac would pass down his port side without breaking-off his survey. The other ac continued on its heading and to his knowledge the flight was not working Lossie. He then saw the other ac, a red coloured twin-engine helicopter, make an avoiding turn to the R and descend when it was about 2nm away. Once the ac had passed he heard a pilot call on frequency reporting an Airprox and that he had had to take avoiding action. He then re-stated to ATC that he was visual with the traffic and that there had been no chance of collision. He was asked to contact Lossie ATC after landing. The helicopter pilot stated that he was aware of

the survey ac operating at 600ft but not another [his PA23] at 2000ft. He assessed the risk as low. Later when he spoke to the Supervisor he was told that they had received the faxes from his operations dept which had clearly stated that on this particular day 2 ac would operate in the area; he was told that Aberdeen Information had also received the same faxes.

ATSI reports that the Airprox occurred in Class G uncontrolled airspace between an EC225 and a PA23, 13·6nm S of Wick (WIK) at altitude 2000ft. The EC225 had departed Foinavon for a flight to Aberdeen and had been in contact with Wick Approach on 119·7MHz under a BS before transfer to Lossiemouth ATC. The PA23 was conducting a wildlife survey in the Moray Firth and was in contact with Lossiemouth on 119·35MHz under a BS. There was a second survey ac in the Moray Firth operating at 600ft amsl.

Wick ATSU provide Basic and Procedural, non-surveillance-based, services outside of CAS. No report was filed by the Wick ATSU in respect of this Airprox.

METAR EGPC 261320Z 14007KT 110V170 9999 FEW019 14/08 Q1012=

CAA DAP reported to ATSI that civil NOTAM action was not taken on the survey activity as the flights were to be in uncontrolled airspace where normal rules of the air applied. There was no ACN directly related to the survey activity in the Moray. ATSI were unable to verify the individual co-ordination activity that may have taken place between the operator and any ATSU.

AIS reported to ATSI that the Area En-Route Pre-Flight Information Bulletin for 26 August 2010 (0908 UTC) to 27 August 2010 (0908 UTC) contained no information on aerial activity in the Moray Firth.

At 1306:20 Wick APP called Lossiemouth with a pre-note on 2 ac, the second of which was the EC225. Wick passed the following information, which was read-back by the Lossiemouth controller, *"…E C two two five … Foinavon to Aberdeen … two thousand feet on a Basic Service … will be overhead Wick minute two zero".* The Lossiemouth controller issued squawk 3730 and frequency 119·35MHz. The conversation terminated at 1307:50. In accordance with UK AIP ENR 1-6-2-9, SSR code 3730 is allocated to RAF Lossiemouth and is considered validated and verified. The Wick MATS Part 2 (Section 5 Chapter 4 paragraph 3.2.1) states:

> 'During the notified hours of Lossiemouth LARS the following coordination will normally be carried out: Traffic operating below FL100 and departing in the sector between W4D and N560D to the south of Wick, except traffic operating on the ADRs, should be pre-noted to Lossiemouth. Lossiemouth will issue an SSR code and any relevant traffic information.'

The EC225 flight called Wick Approach at 1307:40. Wick Approach responded by issuing the QNH and asking the EC225 to pass its message. The EC225 crew requested a BS and routeing via the Wick O/H. The EC225 flight reported on the WIK 355 radial at 28nm maintaining 2000ft. Wick APP agreed to provide a BS. The EC225 was squawking 0040 (allocated to 'Civil North Sea Helicopters: considered unvalidated and unverified). Prestwick Multi Radar Tracking showed the EC225 on track WIK maintaining FL020. The PA23, squawking 3721 (RAF Lossiemouth - validated and verified), was operating within a 5nm radius of MORAY at FL021. A BS is provided for the purposes of giving advice and information useful for the safe and efficient conduct of flights. It may be provided with or without the use of ATS Surveillance Systems. The UK AIP ENR 1.1.2 paragraph 3 notifies that:

> 'Pilots should not expect any form of traffic information from a controller/FISO and the pilot remains responsible for collision avoidance at all times. However, on initial contact the controller/FISO may provide traffic information in general terms to assist with the pilot's situational awareness.'

The associated guidance material provided for CAP774, UK Flight Information Services, Chapter 2 paragraph 1 states:

> 'It is essential that a pilot receiving [a Basic Service] remains alert to the fact that, unlike a Traffic Service and Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.'

This guidance is re-iterated for civil controllers in CAP493 (Section 1 Chapter 11). There is no similar warning for pilots in the UK AIP ENR 1.1.2.

At 1319:50 the EC225 flight reported O/H Wick and was instructed, *"EC225 c/s for Lossiemouth squawk three seven three zero… next report ten miles south".* This was acknowledged and the EC225's squawk was observed to change at 1320:28. At this time the PA23 was 4nm W of MORAY maintaining FL020. The Wick MATS Part 2 (Section 5 Chapter 4 paragraph 4.2) states:

> 'When co-ordinating traffic with Lossiemouth they will issue an SSR code. This should be…passed to the pilot prior to transfer to Lossiemouth.'

There is no specific requirement in the Wick MATS Part 2 for pilots to be requested to make a 10nm S of Wick position report. The EC225 continued its flight S of Wick following, but underneath, Advisory Route W4D, on the WIK VOR 164 radial.

[UKAB Note (1): The WIK 164 radial under the ADR is the HMR X-Ray. The UK AIP ENR 1-15-6/7 states the HMR is bi-directional between Aberdeen and Wick. Altimeter setting outside 30 DME ADN is the appropriate RPS or as directed by ATC. Cruising altitudes S'bound 2000ft to SMOKI (44 DME WIK) and then as directed. Para 2.4.1.2 Fixed-Wing Procedures states:

> 'Crews of wildlife and aerial survey aircraft should consider utilising notification procedures detailed at ENR 1.1.4 [Non-Standard Flight (NSF)or Unusual Aerial Activity (UAA)] as well as contacting Aberdeen ATSU prior to commencing operations.']

At 1324:20 the EC225 flight reported 10nm S of Wick and was transferred to Lossiemouth on 119·35MHz. The PA23 was 5·3nm S of the EC225, in the EC225's 12 o'clock, maintaining FL021 on reciprocal track.

At 1325:08 the PA23 is observed to turn N'bound on to a track approximating the WIK 164 radial at FL021 whilst the EC225 is 1·1nm N of the PA23, S'bound on the WIK 164 radial at FL020, i.e. on a reciprocal track. Four seconds later at 1325:12 the EC225 is seen to commence a R turn, off the 164 radial, and descend to FL019 when it is 0·8nm N of the PA23, which is indicating FL021 on the WIK 164 radial northbound.

At the CPA, 1325:20, the 2 ac pass abeam each other 12·8nm S of WIK, the EC225 W of the PA23 by 0·3 NM, the EC225 at FL019 and the PA23 at FL021. The PA23 then made a R turn away from the 164 radial as lateral distance between the 2 ac increased. The PA23 climbs to FL022 and the EC225 continues its descent to FL018. The EC225 then returns to a S'ly track on the WIK 164 radial at FL020 and the PA23 continues its flight N'bound at FL021.

Prior to transferring the EC225 to Lossiemouth, Wick had received no advance TI on the PA23's presence on the EC225's intended route. ATSI were unable to establish why Lossiemouth did not relay the presence of the PA23 to Wick Approach. Lossiemouth was unable to give traffic information to the EC225 as Wick APP had elected to retain the EC225 on the Wick frequency until 10nm S of Wick. Whilst not considered contributory to this event, ATSI consider that there is insufficient warning to pilots in the UK that, when under a BS, even if transponding on a discrete code, there is no requirement for the controller to be monitoring the ac.

THE LOSSIEMOUTH DEPARTURES CONTROLLER reports screening a U/T controller when the PA23 was conducting a whale survey over the Moray Firth in the vicinity of Beatrice Oil Field at 2200ft Orkney RPS 1007mb under a BS. Wick pre-noted a helicopter S'bound on HMR-X at 2000ft VFR to Aberdeen and a 3730 squawk was issued. A 0040 squawk was observed coasting out S of Wick with the PA23 transiting towards the 0040 squawk. TI was passed when the PA23 was about

5nm S of the 0040 squawk indicating a similar altitude; the PA23 pilot reported visual. The 0040 squawk was seen to change to 3730, and there was about 2nm separation when the EC225 flight made its initial call. The EC225 was identified by the trainee, given the RPS and was asked what type of service was required. The EC225 crew told them to "standby" and the radar return was seen turning and descending away from the PA23. TI was then passed by the mentor to the EC225 flight as his trainee had not done so on its initial call. The radar returns were then seen to merge at similar altitudes before the EC225 crew asked if they were working the ac adjacent to their helicopter. He told the EC225 crew what the other ac was and what his intentions were before requesting what type of service was required. The EC225 crew requested a BS and that an Airprox would be filed after landing, having had to take avoiding action down and to the R. The EC225 crew then asked why the PA23 was not at 600ft amsl in accordance with his notice. He replied that the PA23 pilot had asked to operate at 2200ft amsl. The PA23 pilot then called stating that his company should have passed an amendment to his altitude; however, this had not been received by Lossiemouth.

HQ 1GP BM SM reports this Airprox involved a PA23 conducting a whale survey over the Moray Firth in receipt of a BS from Lossiemouth Departures (DEPS), with the position being filled by a controller under training, and an EC225 outbound from Wick. The Airprox occurred shortly after the EC225 flight contacted DEPS en-route to Aberdeen.

From the reports of the controllers involved it is apparent that they believed that the PA23 was operating on a task that was subject to a NOTAM or ACN action, for which the promulgated altitude was 2200ft AMSL. The PA23 pilot believed that his ops had made this notification; however, it is clear from the transcript that the EC225 pilot expected the PA23 to be at 600ft AMSL.

At 1209:52, the PA23 was placed under a BS by DEPS, with Wick pre-noting the EC225 to DEPS just 1hr later at 1307:29 stating that the EC225 was flying at, "*2000ft on a Basic Service at Wick minute 20*."

At 1324:35, DEPS passed TI to the PA23 on the EC225 stating, "*traffic 12 o'clock, opposite direction, indicating similar height*." At this point 3·5nm lateral separation exists, with the PA23 indicating 100ft higher than the EC225 (SSR Mode C). Although DEPS passed no range information, the PA23 pilot immediately replies that his is "*visual with the traffic*."

At 1324:45, the EC225 flight called DEPS, was identified and asked what type of service was required. The EC225 crew responded at 1325:03 stating, "*eh standby Lossie*." At this point, approximately 1·3nm lateral separation exists between the EC225 and PA23. Realising the potential gravity of the situation, the DEPS screen controller stepped in on the frequency at 1325:08 and passed a traffic warning to the EC225 on the PA23, stating, "*traffic twelve o'clock, 3 miles, opposite direction at similar height*."

[UKAB Note (2): Radar separation is 1·1nm when the DEPS screen controller's transmission commences.]

There is then a pause of 72sec before the EC225 crew replied, "*yeah were visual with that making avoiding action*."

One of the causal factors of this Airprox was the operation of 2 survey ac which the PA23 pilot believed had been promulgated. The unit has identified that the provision of TI to Wick on the PA23 operating in their area may have prevented this occurrence and has taken action to raise awareness of this amongst their controllers; however, from an ATM perspective, DEPS passed timely TI to both ac, with both ac obtaining visual contact with the other.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

The DAP Advisor informed Members that AUS routinely consider the issue of an ACN for survey flights if contacted by the operator. Such an ACN, if raised, would be distributed to all relevant ATSUs, which may be able to provide a service to these flights, as pre-notification of intent. With respect to the issue of a NOTAM for survey flights, as the source information provided is normally generic i.e. only specifying overall activity areas, start and finish dates and max/min altitudes, and since the decision to carry out these flights is usually made at short notice (taking into account various factors including Wx, ac availability etc on the day), the production of a timely and/or meaningful NOTAM to cover such unpredictable activity is not usually possible nor deemed necessary. However, for activity at and below 2000ft amsl, survey operators are encouraged to notify the UK Military Low Flying Section under the CANP system. Furthermore, the AIP entry was not pertinent to this flight – a NSF is for flights within CAS and the wildlife survey was not an UAA; this explained the comment in the ATSI report where NOTAM action would not be taken for this Class G airspace activity. The notification by operators via fax or telephone to ATSUs was what would be expected as this would contain the precise details of the intended flight and could be linked to an associated ACN if previously generated. The LF Ops Advisor also commented that it was common practice that survey operators informed the LF Booking Cell who notified the activity to all users booking into the Low Flying System.

It was clear the EC225 crew were surprised to encounter the PA23 at a similar altitude when they were expecting a survey flight to be operating in the area well below their level at 600ft. That said, the crew were aware of the PA23 from their ACAS equipment display when they were approaching 10 DME WIK, i.e. when it was over 5nm away. The PA23's flightpath had triggered a TA alert - TCAS 1 cannot generate RAs – as the EC225 crew contacted Lossie. The PA23 was seen <1nm ahead and the P1, unhappy with the separation that pertained, initiated a R turn and a descent to avoid it, estimating 0·5nm separation. The PA23 pilot, although under a BS, was given a traffic warning by Lossie DEPS on the approaching EC225 and he immediately saw the helicopter over 3nm away and elected to turn R 5° to ensure it passed down his LHS but without breaking-off his survey and taking visual separation on it. However, in doing so, the PA23 had flown close enough to the EC225 to cause its crew concern and this had caused the Airprox. Members agreed the PA23 pilot had been overly task-focussed, for although he had taken due regard of the EC225 and discharged his responsibilities under 'see and avoid', he should have considered the situation more carefully and the separation that pertained – aiming to pass with minimum separation does not allow any margin for error by either party.

Wick APP had pre-noted Lossie DEPS about the EC225; however, DEPS had not told Wick about the PA23, in accordance with the MATS Part 2 procedure. After the initial RT exchange between the trainee and the EC225 flight, DEPS Mentor had stepped-in and passed a traffic warning, owing the proximity of the PA23, although by then the EC225 crew were already taking action. The radar recording shows 0·3nm and 200ft separation at the CPA, the ac passing port to port on opposite direction tracks. Although this had been an untidy affair, all of the actions taken, when combined, were enough to allow the Board to conclude that any risk of collision had been effectively removed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA23 flew close enough to the EC225 to cause its crew concern.

Degree of Risk: C.