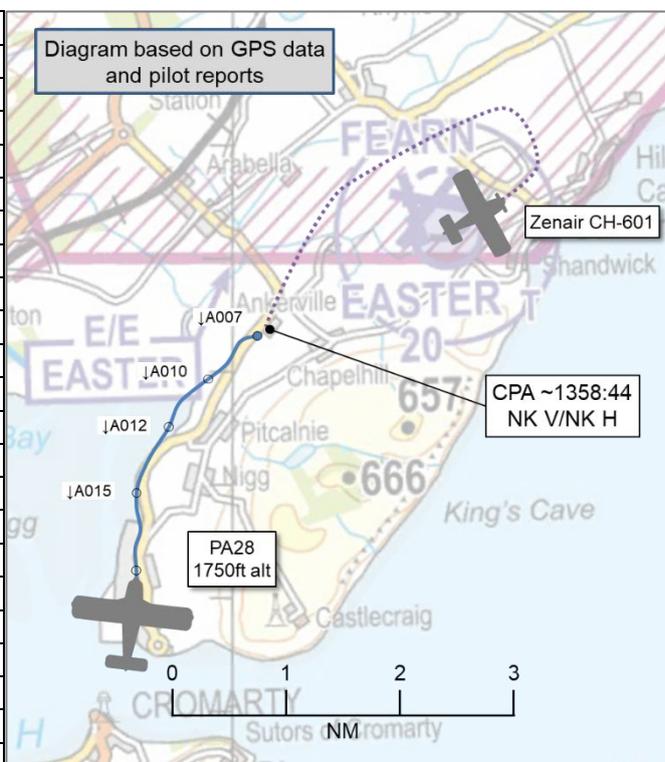


AIRPROX REPORT No 2021037

Date: 25 Apr 2021 Time: ~1359Z Position: 5744N 00359W Location: IVO Easter airfield circuit

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	Zenair CH-601
Operator	Civ FW	Civ FW
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	SafetyCom	SafetyCom
Altitude/FL	NK	NK
Transponder	None detected	None detected
Reported		
Colours	White, red	Dark blue, silver
Lighting	Beacon, strobes	Strobe
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	640ft descending	1000ft
Altimeter	QNH (1031hPa)	QNH (1031hPa)
Heading	060°	220°
Speed	75kt	85kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	<100ft V/<100ft H	200ft V/2-300m H
Recorded	NK V/NK H	



THE PA28 PILOT reports conducting a dual check training flight. On 3 mile final and having called final approach to RW06 at Easter Airfield near Tain they heard [the Zenair] rolling on RW06. While on the approach at 640ft, [the Zenair] appeared below and to the right at less than 100ft away climbing through the RW06 approach. The pilot immediately initiated a left turn to increase separation. Easter Airfield has published circuit patterns on the website and in several publications, none of which allow for climbing out on a final approach. This 'familiarisation' or 'complacency' risk needs to be highlighted to all users of small airfields.

The pilot assessed the risk of collision as 'High'.

THE ZENAIR CH-601 PILOT reports they took off from RW06 at Easter and followed a left-hand turn out. When clear of the circuit, they made a call that they were leaving the circuit and routing to Nigg and were maintaining 1000ft (they believe that they mentioned their height). The sun was bright and ahead of them. Approximately halfway between Easter and Nigg (terminal) they spotted the other aircraft at their one o'clock, slightly above them and heading towards them but appearing as if it would pass behind them. Although it would have been very close, they do not think they would have collided but they both took avoiding action. They did not hear any transmissions from the other aircraft.

The pilot assessed the risk of collision as 'Medium'.

Factual Background

The weather at Inverness was recorded as follows:

METAR EGPE 251350Z 03007KT 350V070 9999 FEW040 12/04 Q1030=
 METAR EGPE 251420Z 02008KT 9999 FEW040 12/04 Q1030=

Analysis and Investigation

UKAB Secretariat

The NATS radar replay was reviewed; neither aircraft was visible on radar in the vicinity of Easter airfield at the time of the reported Airprox.

Easter airfield does not have an entry in the UK AIP. However, the Easter pilot information available on the internet¹ includes the following:

CIRCUIT PATTERN

All circuits to the north of the airfield unless otherwise instructed by Tain Range.
24(R) right hand circuits, 06(L) left hand.

Observe noise abatement areas marked on circuit pattern diagram.

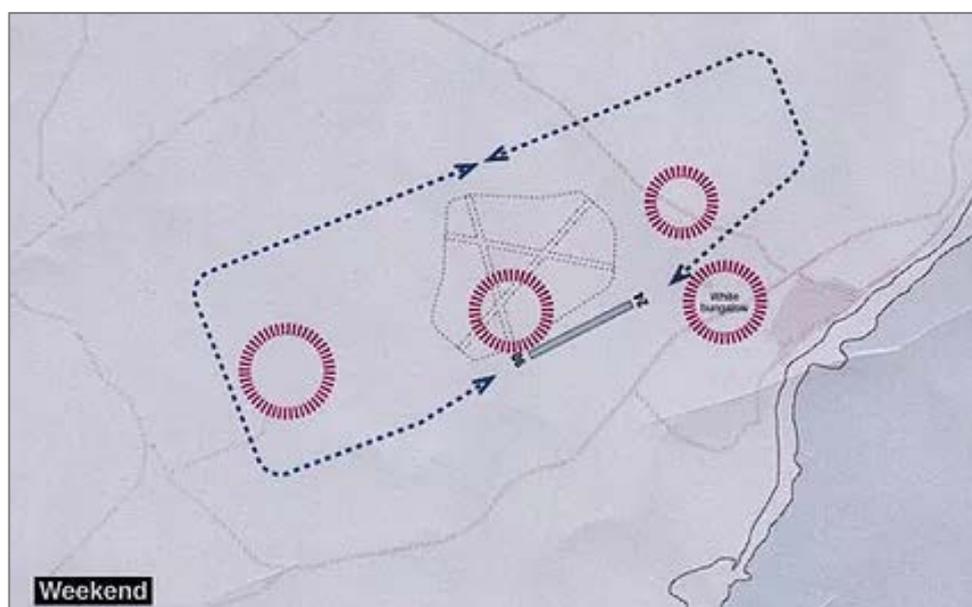


Figure 1 - Easter airfield noise abatement diagram

Departing traffic 06 are to make an immediate left turn when airborne. Depart downwind LH for Nigg entry/exit lane.

Departing traffic 24 are to climb on initial heading to Nigg entry/exit lane.

Caution wind turbine on north of 06 final / 24 climb out.

RADIO

Radar service is available from Inverness Approach on 122.605.

Due to the mixture of commercial, rescue and GA traffic in the area, we strongly recommend contacting Inverness when within 20 miles of the Inverness ATZ.

When Tain Range is not operational, use SAFETYCOM (135.480).

If unfamiliar with the use of SAFETYCOM, please consult CAP413.

¹ <https://www.easterairfield.co.uk/pilot-information>

There are several airfields in the vicinity operating SAFETYCOM and pilots should attach “EASTER TRAFFIC” to all RTF transmissions when using Easter Airfield.

The PA28 and Zenair pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.² An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.³

Summary

An Airprox was reported when a PA28 and a Zenair CH-601 flew into proximity in the vicinity of the Easter airfield circuit at ~1359Z on Sunday 25th April 2021. Both pilots were operating under VFR in VMC and both pilots were listening out on the SafetyCom frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar video recordings and GPS data from the PA28 pilot. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first considered the local procedures as published on the Easter Airfield website and discussed how the specification of an 'entry/exit lane' affected traffic patterns around the airfield. Members agreed that instructing pilots to use this entry/exit lane increased the likelihood of aircraft coming into proximity and was contributory to this Airprox (**CF1**). The Board noted that there were no instructions pertaining to the altitudes/heights to be flown on entry and exit, meaning that it was for individual pilots to decide their own flight parameters on arrival and departure, and the Board felt that it may be beneficial for the Easter Airfield owner to review the procedures on the website and consider a procedural altitude deconfliction for arriving and departing aircraft. Whilst this cannot guarantee the separation of aircraft (at some point, aircraft departing from RW06 would need to cross the approach path for arriving aircraft), it may reduce the likelihood of a recurrence of an event such as this Airprox.

Turning to the actions of the pilots involved, the Board lamented the lack of RTF recording to assist in their understanding of the event. The PA28 pilot reported hearing the Zenair pilot's 'rolling' call but had not heard the subsequent call from the Zenair pilot that they were leaving the circuit, and the Zenair pilot had not heard any transmissions at all from the PA28 pilot. At an un-staffed airfield operating on the SafetyCom frequency, radio transmissions are one of only 2 means available to pilots of gaining situational awareness (the other being some form of electronic conspicuity, such as SkyEcho, FLARM etc). Because neither of the aircraft involved had been fitted with a device that could detect the presence of the other aircraft, the Board agreed that these missed radio calls had led to the PA28 pilot having reduced situational awareness of the position of the Zenair, and the Zenair pilot having no situational awareness at all of the presence of the PA28 (**CF4**). Because the PA28 pilot had heard the Zenair pilot's 'rolling call', members felt that the PA28 pilot could have requested an update to their position from the Zenair pilot (**CF3**) which would have aided the situational awareness of both pilots. Furthermore, the Board also felt that the PA28 pilot could have adjusted their plan to take more account of the departing Zenair – until they were either certain that it had left the area or they had sighted it (**CF2**). In the event, both pilots had been relying on the See and Avoid barrier and members agreed that neither pilot had sighted the other aircraft in time to prevent an Airprox from occurring (**CF5**).

Finally, the Board discussed the risk involved in this event. Unfortunately, the NATS radars had not detected either aircraft and the Zenair pilot had not been using a GPS system from which the log file could have been retrieved. This left the Board with the only known track and altitude being that of the

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PA28 pilot and so members took into account both pilots' reported estimation of separation and their assessment of the collision risk. Whilst it had not been possible to establish the exact CPA, the Board felt that both pilots had described a situation in which safety had been much reduced where both pilots had had to take immediate action to ensure safe separation between the 2 aircraft. Therefore, the Board concluded that a risk of collision had existed (**CF6**) and, accordingly, assigned a Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2021037				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
1	Organisational	• Flight Operations Documentation and Publications	Flight Operations Documentation and Publications	Inadequate regulations or procedures
• Tactical Planning and Execution				
2	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
• Situational Awareness of the Conflicting Aircraft and Action				
3	Human Factors	• Lack of Communication	Events involving flight crew that did not communicate enough - not enough communication	Pilot did not request additional information
4	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
• See and Avoid				
5	Human Factors	• Identification/Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
• Outcome Events				
6	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B

Safety Barrier Assessment⁴

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the published procedures for Easter airfield instruct pilots arriving and departing to use the same routing, thus inducing a potential conflict between traffic joining and traffic departing.

Tactical Planning and Execution was assessed as **partially effective** because the PA28 pilot, on hearing the Zenair pilot's rolling call, did not adapt their join to take account of the Zenair departing as per the published procedures.

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

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the Zenair pilot had had no situational awareness of the presence of the PA28, and the PA28 pilot had only generic situational awareness of the position of the Zenair.

See and Avoid were assessed as **partially effective** because both pilots spotted the other aircraft late and both pilots had to initiate immediate avoiding action.

Airprox Barrier Assessment: 2021037		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness					
			Barrier Weighting					
			0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	●	●					
	Manning & Equipment	●	●					
	Situational Awareness of the Confliction & Action	●	●					
	Electronic Warning System Operation and Compliance	●	●					
Flight Element	Regulations, Processes, Procedures and Compliance	⚠	✓					
	Tactical Planning and Execution	✓	⚠					
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓					
	Electronic Warning System Operation and Compliance	●	●					
	See & Avoid	⚠	⚠					
Key:								
	<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>			
Provision	✓	⚠	✗	●	○			
Application	✓	⚠	✗	●	○			
Effectiveness	■	■	■	■	□			