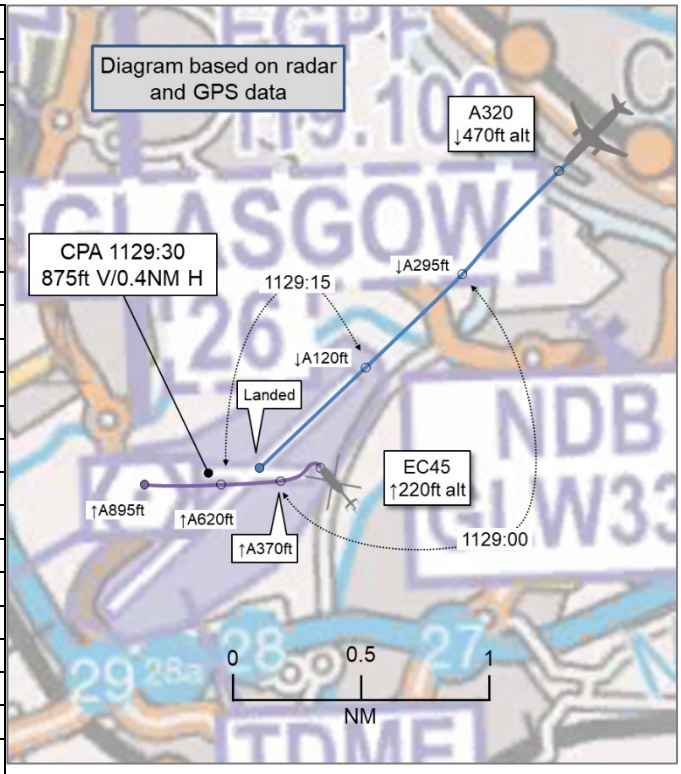
AIRPROX REPORT No 2022045

Date: 01 Apr 2022 Time: 1130Z Position: 5552N 00426W Location: Glasgow airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A320	EC45
Operator	CAT	HEMS
Airspace	Glasgow CTR	Glasgow CTR
Class	D	D
Rules	IFR	VFR
Service	ACS	ACS
Provider	Glasgow Tower	Glasgow Tower
Altitude/FL	On ground	895ft
Transponder	A, C, S+	A, C, S+
Reported		
Colours	White, Blue	Yellow
Lighting	NR	Nav, Landing
Conditions	VMC	VMC
Visibility	NR	NR
Altitude/FL	500ft	NR
Altimeter	QNH (NR hPa)	QNH (NK hPa)
Heading	NR	NK
Speed	135kt	NK
ACAS/TAS	TCAS II	TCAS I
Alert	Unknown	None
Separation at CPA		
Reported	0-400ft V/0.5-1NM H	NK V/NK H
Recorded	875ft V/0.4NM H	



THE A320 PILOT reports that they were on final approach to land RW23 at Glasgow. When they were at approximately 2.5NM final, a helicopter was cleared to lift from the GA area to the south of RW23 and depart to the north, crossing RW23. At approximately 400ft/1NM final they were cleared to land by ATC. At this point they became visual with the departing helicopter. Instead of crossing the runway it appeared to be tracking along RW23, directly in front of them and at a similar altitude. As they continued the approach to land, it became obvious that if they had needed to execute a missed approach, they would very rapidly close to an unacceptable distance from the helicopter and they would need to make an immediate evasive turn to avoid a collision. At this point the safest option was to continue the approach to land. When they were at approximately 0.5NM final, the helicopter turned to the right and departed the runway to the north. They estimate that the lateral separation was between 1NM and 0.5NM, with vertical separation ranging from 0 to 400ft. They continued to a normal landing.

THE EC45 PILOT reports that a clearance was given by ATC for a FATO[1] departure. Traffic information was given by ATC regarding a fixed wing on final approach to the runway. They acquired the traffic visually and notified ATC of it. The departure was conducted with no occurrence, flight path was not changed due to the traffic on final, and at no point was the traffic perceived to be a conflict.

The pilot assessed the risk of collision as 'None'.

THE GLASGOW TOWER CONTROLLER reports [that the EC45 pilot] called ready for departure on the Gamma apron for a south-westerly FATO departure. An inbound [aircraft] (SF34) was at 2NM, with a landing clearance, so the [EC45 pilot] was told to hold position due inbound traffic. [The A320] was inbound, number 2, at approximately 8NM at this time. As the [SF34] was touching down, [an unrelated

[1] A defined area over which the pilot completes the final phase of the approach to a hover or a landing, and from which the pilot initiates take-off.

aircraft pilot] called for clearance. [The unrelated aircraft pilot] was told to stand-by, and straight after the [EC45 pilot] was given Traffic Information on the [SF34], which was past the intersection on the runway, and on the [A320] which was approaching 4NM, and was then given a take-off at your discretion clearance from the Gamma apron with a clearance to cross RW23. The [A320 pilot] was then given Traffic Information on the [EC45], and was informed that the [EC45] would be crossing above the runway left-to-right, northwest bound. The [SF34 pilot] was given an instruction to vacate the runway and taxy to stand. When the [EC45] was just north of the runway, the [A320 pilot] was given landing clearance at 1NM. The [A320] landed about 50-60sec later, and was given taxy instructions to stand. Once on stand the captain requested a number for ATC to discuss the event, which they were given.

Factual Background

The weather at Glasgow was recorded as follows:

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METAR EGPF 011120Z AUTO 30008KT 270V330 9999 NCD 07/M06 Q1023
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Analysis and Investigation

Glasgow Unit Investigation.

An investigation was carried out by Glasgow ATC during which RT and radar recordings were reviewed and the ATCO interviewed. A summary of the investigation and findings is below:

The controller actions were correct and consistent with standard practice at the point of issuing clearance for the [EC45] to depart, although timings would be tight and would require close monitoring. Weather was reported as good VFR and it was expected that [the A320 pilot] would be visual with the departing helicopter with Traffic Information being passed to both aircraft.
However, the [EC45] took longer to complete the departure manoeuvre (FATO) and put the ATCO under pressure to issue landing clearance to the [A320]. Alternative actions for the [EC45] were not considered by the ATCO at the time, which included holding clear of the runway or making a left orbit to the east of the runway to then pass behind the landing [A320]. In a telephone conversation with [EC45 company] Operations, the Safety Officer suggested that the pilot may have been inexperienced in operating out of Glasgow using the FATO procedure.

The ATCO was of the opinion, although tight, it was safe and in their opinion did not constitute an Airprox. The SMR replay confirmed that the [EC45] was only just in forward flight from the FATO at the point the [A320 pilot] was cleared to land. From SMR and ATM recordings, a return was observed, believed to be the [EC45], approximately 0.5NM north of the runway when the [A320] touched down. The SMR did not detect or show the [EC45] as it crossed the runway and there were no [runway incursion] alarms. In a telephone call from the [A320] captain, they stated ”If they had to go around for any reason, they [the EC45] would’ve been directly in their path because they were still pretty much overhead on the centre line of the runway while they were about 1NM final so they were not sure if that was an issue with them not clearing the runway as quickly as ATC would’ve hoped. In terms of options in a go around they would have had to turn left immediately to avoid [the EC45] because as they crossed [the runway] they seemed to fly along the runway before they eventually cleared off to the north.”

The controller had not appreciated the proximity of both aircraft and had failed to actively monitor the progress of the [EC45], having initially stated in their report ‘when the [EC45] was just north of the runway, the [A320 pilot] was given landing clearance at 1NM.’ This was an assumption presumably based on expectation bias as there is no evidence to suggest otherwise. Although the initial plan was sound, the traffic situation changed and required an alteration to the plan which was not considered and/or executed.

The controller stated that they did assess their workload, checking the Ground Movement Panel for pending traffic and decided they did not require a Ground controller based on traffic loading and

complexity. Controller misjudgement and failure to monitor led to the [EC45] crossing the runway tight in front of the landing [A320].

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and, although both aircraft had been detected, the A320 disappeared in the final stages of the approach and the EC45 only became visible as it passed 700ft in the climb. Fortunately, the UKAB secretariat has been able to obtain GPS data that displays both aircraft throughout the event and this has been used to measure the CPA. The A320 pilot reported the Airprox to have occurred whilst they were making their final approach and the EC45 was in the vicinity of the runway however, the separation between the two aircraft continued to decrease after this point and CPA occurred when helicopter had cleared the runway and departed to the west and the A320 had been on the ground. In the vicinity of aerodromes, the standard separation minima may be reduced if adequate separation can be provided by the aerodrome controller when each aircraft is continuously visible to this controller.[2]

The A320 and EC45 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[3] 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.[4]

Summary

An Airprox was reported when a A320 and an EC45 flew into proximity at Glasgow airport at 1130Z on Friday 1st April 2022. The A320 pilot was operating under IFR in VMC, the EC45 under VFR in VMC, both pilots in receipt of an ACS from Glasgow Tower.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board discussed this event and were satisfied that there had been no risk of collision however, members did agree that, had the A320 pilot carried out a missed approach, then the presence of the EC45 may have become a threat which may then have required mitigation. Members also discussed the actions and instructions of the controller and, although the unit investigation reports that they had not considered alternative plans, they agreed that the controller's actions had not resulted in a degradation in safety. Members were satisfied that normal safety standards and parameters had pertained and, as such, the Board assigned Risk Category E.

Members agreed on the following contributory factors:

CF1. The A320 pilot had been concerned by the presence of the EC45 specifically regarding its location relative to the missed approach flight path.

[2] CAP 493 - Manual of Air Traffic Services - Part 1, Section 1:Chapter 3 Para 3A.1(1).
[3] (UK) SERA.3205 Proximity.
[4] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022045			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• See and Avoid			
1	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

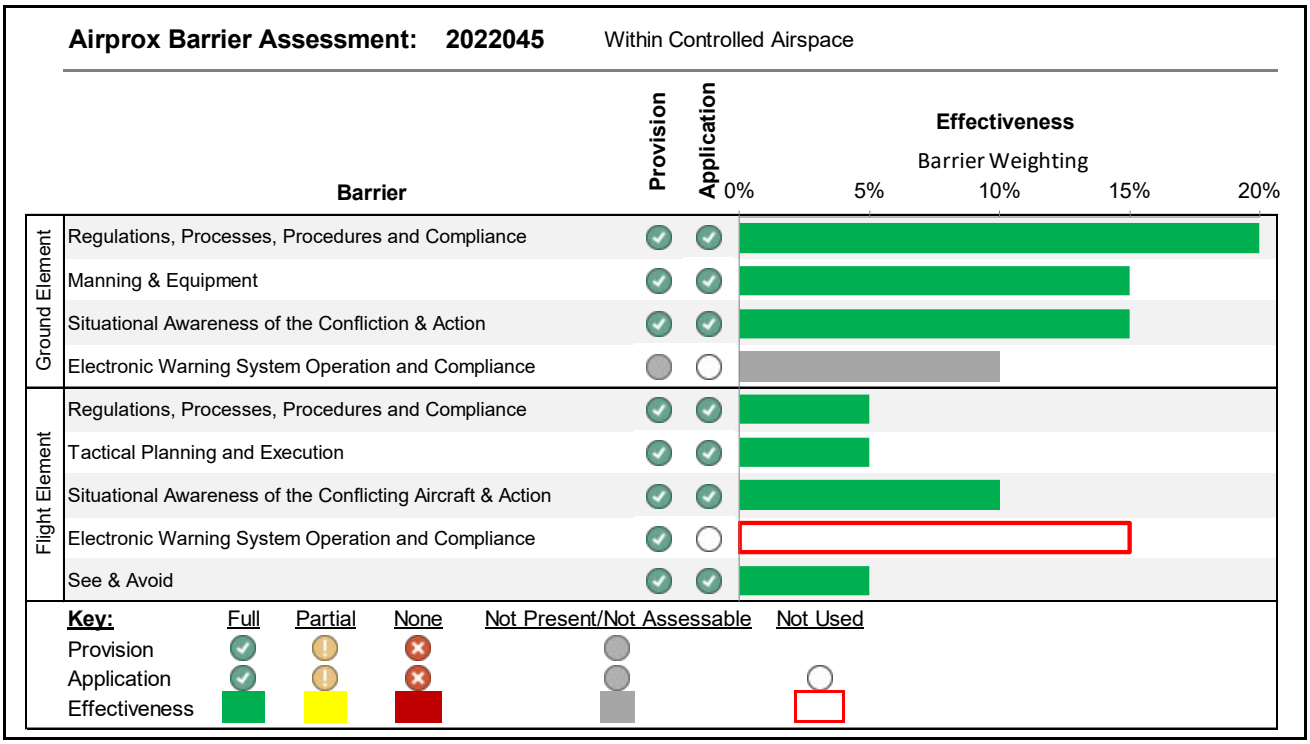
Degree of Risk: E

Safety Barrier Assessment[5]

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

Flight Elements:

Electronic Warning System Operation and Compliance were assessed as **not used** because the proximity and geometry of the aircraft had been such that they had not met the alert criteria of the system



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