



Summary Report

A summary investigation, in accordance with article 45 of the Ordinance on the Safety Investigation of Transport Incidents (OSITI), was carried out with regards to the following accident or serious incident. This report was prepared to ensure that lessons can be learned from the incident in question.

Aircraft	Avro 146-RJ100	HB-IYT	
Main operator	Swiss Global Air Lines AG, Malzgasse 15, 4052 Basel (Switzerland)		
Main owner	Triangle Regional Aircraft Leasing Limited, 1 Bishop Square, St Albans Road West, AL10 9NE, Hatfield, Hertfordshire (UK)		
Pilot	Swiss citizen, born 1955		
Licence	Airline transport pilot licence aeroplane (ATPL(A)) according to European Aviation Safety Agency (EASA), issued by the Federal Office of Civil Aviation (FOCA)		
Flying hours	Total 15 500 h	During the last 90 days 104 h	
	On the incident type 5 750 h	During the last 90 days 104 h	
Co-pilot	Italian citizen, born 1993		
Licence	Multi-crew pilot licence aeroplane (MPL(A)) according to EASA, issued by the FOCA		
Flying hours	Total 188 h	During the last 90 days 188 h	
	On the incident type 167 h	During the last 90 days 167 h	
Location	6 NM east of London City Airport (EGLC)		
Coordinates	N 51° 29' 55.79" E 0° 13' 28.79" (WGS 84)	Altitude approx. 3000 ft AMSL ¹	
Date and time	19 June 2016, 13:26:20 UTC		
Type of operation	Scheduled flight		
Flight rules	Instrument flight rules (IFR)		
Flight phase	Approach		
Type of incident	Near collision with drone		
Point of departure	Zurich (LSZH)		
Destination	London City (EGLC)		
Injuries to persons	Crew	Passengers	Third parties
Minor	0	0	0
None	4	87	-
Damage to aircraft	Not damaged		
Third-party damage	None		

¹ AMSL: above mean sea level

History of the serious incident

The incident concerned a scheduled flight from Zurich (LSZH) to London City (EGLC) with flight number LX456 and radio call sign ‘Swiss Four Five Charlie’ with 87 passengers and 4 crew members on board. The pilot was the pilot flying (PF) and the co-pilot carried out the role of the pilot monitoring (PM).

After an uneventful flight, the aircraft was aligned to the position line of runway 27’s localiser in good visual meteorological conditions (VMC), when the PM, shortly before intercepting the glide path at 3000 ft AMSL and approximately 6 NM from the runway threshold, spotted a flying object. He assessed this to be a yellow-coloured drone that was crossing the flight path at the same altitude approximately 20 metres away. There was no radio message to Thames Radar control centre regarding the near collision.

The flight crew continued with the approach and the aircraft landed without incident. After landing, the flight crew informed the duty officer of Swiss about the incident who in turn passed the information on to STSB via the usual channel of communication.

The occurrence of drones

The reports of air proximity hazards (airproxes) between aircraft and other flying objects that have been recorded by the United Kingdom (UK) Airprox Board clearly reflect the increasing number of global occurrences of unmanned aircraft (UA). Drones account for the majority of these incidents.

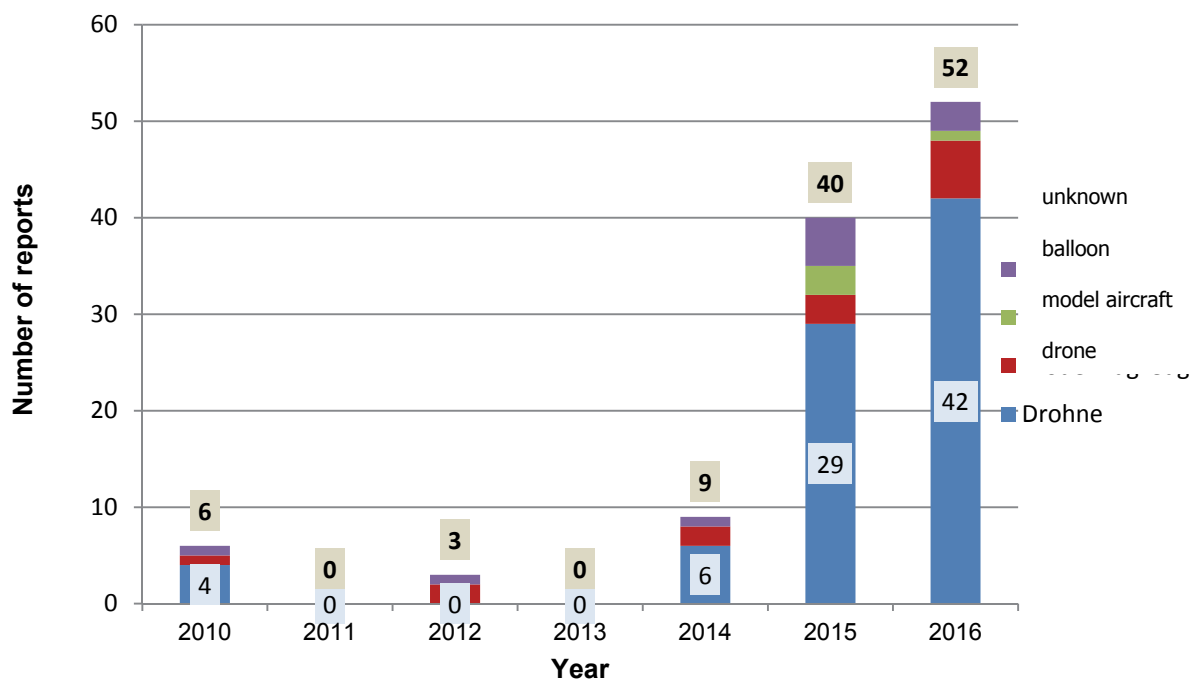


Figure 1: Reports regarding airproxes between aircraft and drones as well as other flying objects, recorded by the UK Airprox Board (as at July 2016)

According to the statistically compiled data, the majority of reported airproxes occurred outside the vicinity of airports. The number of reported airproxes between drones and, predominantly, airliners in 2015 and 2016 (as at July) within the vicinity of London airports (cf. Figure 2) can nevertheless not be disregarded.

Trials are scheduled for the second half of 2016 to see how potential UAs can be identified using radar.



Figure 2: Reports concerning airproxes between aircraft and drones within the vicinity of London airports in 2015 and 2016 (as at July)

Conclusions

The number of reported airproxes between drones and aircraft within the vicinity of London airports in 2015 and 2016 (cf. Figure 2) indicates a significant risk of collision.

Even with the prevailing good visual meteorological conditions (VMC) in the incident in question, the proximity of the drone was detected only at a late stage. By which time, if there had been a collision course, an evasive manoeuvre would probably no longer have been possible.

On account of the fact that unmanned aircraft are difficult to detect visually due to their small size and cannot be captured by collision warning devices at an early enough point, prompt sending of a relevant radio message – similar to a pilot weather report (PIREP) – is recommended in order to immediately gain the attention of other flight crews.

Measures to ensure that unmanned aircraft can be detected on radar and on board aircraft at an early stage using collision warning devices are absolutely imperative for flight safety reasons.