

ACCIDENT

Aircraft Type and Registration:	DJI Matrice 210 (UAS, registration n/a)	
No & Type of Engines:	4 electric motors	
Year of Manufacture:	2018 (Serial no: 0N4DF6L0210036)	
Date & Time (UTC):	3 March 2019 at 1125 hrs	
Location:	Maidstone Road, Leicester	
Type of Flight:	Emergency services operations	
Persons on Board:	Crew - N/A	Passengers - N/A
Injuries:	Crew - N/A	Passengers - N/A
Nature of Damage:	Destroyed	
Commander's Licence:	Other	
Commander's Age:	26 years	
Commander's Flying Experience:	57 hours (of which 10 were on type) Last 90 days - 13 hours Last 28 days - 5 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The DJI Matrice 210 quadcopter small unmanned aircraft (SUA)¹ was being operated by the Police as part of a training exercise. The pilot had checked the weather as part of his preparations and although rain was forecast, it was considered the conditions were suitable as the aircraft had an IP43² rating.

After lift-off and control checks were completed satisfactorily, the aircraft was ascended to 90 m (300 ft) to maintain safe separation from nearby buildings. It was still raining but as the flight progressed the rain eased to drizzle.

After approximately five minutes and whilst the aircraft was being repositioned, it suddenly started to spin rapidly and fell to the ground. The pilot attempted to warn people by shouting "look out, move". It took an estimated five seconds for the aircraft to fall to the ground, where it was destroyed on impact (Figure 1). No person was injured.

Footnote

¹ A SUA is defined by the Air Navigation Order (ANO) 2016 (Amendment 13 March 2019) as '*any unmanned aircraft, other than a balloon or a kite, having a mass of not more than 20 kg without its fuel, but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight.*' This meaning includes traditional remotely controlled model aeroplanes, helicopters or gliders, as well as multicopter 'drones' and remotely controlled 'toy' aircraft.

² Refer to DJI Matrice 210 - EW/G2019/03/12 in this AAIB Bulletin 1/2020 for information on IP43 environmental protection.

Examination of the recorded data showed that a MOTOR BLOCKED warning message had been activated and the No 3 (rear left) motor had failed.

Refer to report on DJI Matrice 210 - EW/G2019/03/02 in this AAIB Bulletin 1/2020 for information on other accidents involving the DJI Matrice 210 and Safety Recommendations concerning the safe operation of a UAS near to people and congested areas.



Figure 1
Wreckage of the SUA