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: 0GODF860240214)	
Date & Time (UTC):	19 January 2019 at 1300 hrs	
Location:	Clevedon, Somerset	
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:	Not applicable	
Commander's Age:	39 years	
Commander's Flying Experience:	38 hours (of which 5 were on type) Last 90 days - 4 hours Last 28 days - 8 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The DJI Matrice 210 quadcopter small unmanned aircraft (SUA)[1] was conducting a check flight to test, among other things, a camera for water intrusion following a flight the previous day. With the batteries fully charged the aircraft took off and after a successful systems check was flown to a position 500 m north of the takeoff site where it ascended to a height of 120 m (~390 ft) agl. The visibility was good, wind steady at 16 mph and light drizzle. The aircraft then hovered for approximately five minutes whilst conducting the intended checks before returning towards the takeoff and landing site (TOLS). When the aircraft was about 360 m from the TOLS it fell vertically to the ground, where it landed in an empty field. The aircraft was destroyed on impact (Figure 1).

Recorded data from the aircraft was analysed by the manufacturer who determined that the No 2 (front left) electronic speed controller had failed, likely as a result of water ingress.

Refer to report on DJI Matrice 210 - EW/C2019/03/02 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.

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 multirotor '*drones*' and remotely controlled '*toy*' aircraft.

Figure 1
Wreckage of the SUA