

**UAS Malloy T150**

**Field in South Scarle,  
Lincoln**

**27 June 2023**

**Accident**

### **Investigation Synopsis**

Whilst being operated in a manual flight mode, the unmanned aircraft breached the geofence and changed to an automated flight mode. In response, the remote pilot reduced the throttle and changed back to the manual mode. Control of the aircraft was lost because the mode was changed at a low throttle setting and the subsequent actions to regain control were unsuccessful. The aircraft struck the ground and was destroyed.

The operator no longer uses the manual mode and has promoted the use of standardised phraseology between the ground control station operator and the remote pilot. Further action has been taken to consider and apply a suitably sized geofence for each operational flight.

The Operation Safety Case on which the Civil Aviation Authority (CAA) granted a Specific Category Operational Authorisation were missing definitions and procedures for the use of geofences and actions to be taken in the event of a breach. A Safety Recommendation has been made to the CAA as these omissions have further effect as the use of a geofence is widely used as a mitigation for several other operational risks.

### **Safety Recommendation 2024-016**

#### **Justification**

The use of a geofence was the mitigation identified in the Operational Safety Case (OSC) to reduce the impact of several risks to as low as reasonably practicable. The OSC did not contain any information on the definition of a geofence, the response of to the unmanned aircraft to a breach of the geofence or the actions to be taken by the remote pilot. As part of the Operational Authorisation review process the granting authority should ensure that the OSC contains sufficient detail regarding the definition of the safety feature and the procedures by which it is implemented.

Therefore, the following safety recommendation was made:

#### **Safety Recommendation 2024-016**

It is recommended that the UK Civil Aviation Authority, when granting Operational Authorisations for Unmanned Aircraft Systems in the specific category, ensure that any safety feature that is used to mitigate risks, is adequately defined in the Operational Safety Case and includes the necessary operational procedures.

**Date Safety Recommendation made:** 03 September 2024

#### **LATEST RESPONSE**

**Response received:** 16 October 2024

The CAA acknowledges and accepts the above recommendation. Actions intended to close this recommendation are detailed below.

**Planned CAA Actions**

In addition to reviewing our internal procedures and training, we shall improve guidance to UAS Operators applying for UAS Operational Authorisation (OA) in the Specific Category of operations.

**1. Amend CAP 722A**

CAP 722A, Unmanned Aircraft System Operations in UK Airspace – Operating Safety Cases, provides guidance material for use by applicants for an OA in the Specific Category of operations. This helps applicants to comply with Article 111 of the UK Reg (EU) 2019/947 (the UK UAS Implementing Regulation).

The CAA will:

- Amend CAP 722A, to ensure UAS Operators are aware that their Operations Manual must include procedures for safety features they intend to use to mitigate risk.
- Amend Appendix A: OSC Compliance Checklist Template to include procedures for the use of UAS safety features.

**2. Amend CAP 2606**

CAP 2606 PDRA01, Operations Manual template, shall be amended to include the procedures for the use of safety features.

**Next Steps**

The CAA will provide an update on these actions to address this safety recommendation by 01 Mar 2025.

**Safety Recommendation Status**

**Open**

**AAIB Assessment**

**Adequate**

**Action Status**

**Planned Action Ongoing Update Due 01 March 2025**

**Feedback rationale**

The AAIB acknowledges the response and the actions being taken by the CAA in response to this Safety Recommendation and request an update by 01 March 2025 (EU Regulation 996/2010 article 18 refers).

**RESPONSE HISTORY**

N/A