


<b>Irish Aviation Authority</b> The Times Building 11-12 D'Olier Street Dublin 2, Ireland www.iaa.ie  <b>Safety Regulation  Division</b>	<b>Údarás Eitlíochta  na hÉireann</b> Foircneamh na hAmanna 11-12 Sráid D'Olier Baile Átha Cliath 2, Éire  <b>Rannán na Rialachán  Sábháilteachta</b>	<b>UAS ADVISORY  MEMORANDUM (UAM)</b>  NO. UAM 013 ISSUE 4 DATE 22.02.2024	
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## Guidance on Enhanced Containment, Flight Termination Systems, and MoC Light-UAS.2511

### 1. Change Record

Date	Issue	Revision Description
28.11.2023	1	Initial publication.
30.11.2023	2	Annex A update
26.01.2024	3	Annex A update
22.02.2024	4	Annex A update

### 2. References

- Regulation (EU) 2019/947, on the rules and procedures for the operation of unmanned aircraft.<sup>1</sup>
- Means of Compliance with Light-UAS.2511 Containment<sup>2</sup>

### 3. Purpose

The purpose of this guidance document is to outline the requirements for enhanced containment and associated means of compliance to Light-UAS.2511.

### 4. Definitions

For the purposes of this guidance document, the definitions in Regulation (EU) 2019/947, Irish Aviation Authority Act, 1993 and S.I. No. 24 of 2023 apply.

<sup>1</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0947&from=EN>

<sup>2</sup> <https://www.easa.europa.eu/en/downloads/136458/en>

## 5. Enhanced Containment

Step #9 of the Specific Operations Risk Assessment (SORA)<sup>3</sup>, addresses adjacent area and airspace considerations. It addresses *“the risk posed by a loss of control of the operation, resulting in an infringement of the adjacent areas on the ground and/or adjacent airspace”*.

*“No probable failure of the UAS or any external system supporting the operation should lead to operation outside the operational volume”*.

Enhanced containment is required for operations:

- (1) either where the adjacent areas:
  - (i) contain assemblies of people<sup>1</sup> unless the UAS is already approved for operations over assemblies of people; or
  - (ii) are ARC-d unless the residual ARC of the airspace area intended to be flown within the operational volume is already ARC-d;
- (2) Or where the operational volume is in a populated area where:
  - (i) M1 mitigation has been applied to lower the GRC; or
  - (ii) operating in a controlled ground area.

A Flight Termination System (FTS) is one method that may be used to address this containment requirement.

## 6. MoC Light-UAS.2511

*“MoC is meant for a declaration toward the competent authority issuing the operational authorisation for operations up to SAIL II. It provides the possibility, for UAS leveraging FTS, to substantiate, with a simple design checklist and a set of tests, the FTS performances”*.

It provides *“a design checklist and a set of tests”* whose *“application and successful passing can be utilized to credit an FTS install on a UAS with a probability of failure  $< 10^{-2}$  / Flight Hours”*. Please see the MoC for details.

## 7. Applications to the Authority.

Operators wishing to use an FTS as a method to address the enhanced containment requirement should:

- Request a declaration of compliance with MoC.2511 and associated evidence from the manufacturer of their FTS and submit with their operational authorisation application, or

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<sup>3</sup> Reg (EU) 2019/947 AMC1 Art 11 2.5.3

- Utilise a UAS/FTS configuration already assessed as compliant by the Authority. See Annex A. This will be updated as new evidence is received.

## ANNEX A – Approved UAS/FTS Configurations

Manufacturer	Flight Termination System	UAS
AVSS <sup>4</sup>	PRS-M300EX	DJI M300
AVSS	PRS-M350EX	DJI M350
Dronavia <sup>5</sup>	FTS-MOC KRONOS	DJI Inspire 3
Dronavia	FTS-MOC KRONOS	DJI M350
Dronavia	FTS-MOC KRONOS	DJI M300
Dronavia	Zéphyr CC	DJI M30
Dronavia	Zéphyr CC	DJI Mavic 3
ParaZero <sup>6</sup>	SafeAir	DJI M300
ParaZero <sup>7</sup>	SafeAir	DJI Mavic 3
ParaZero	SafeAir	DJI M350
ParaZero	SafeAir	DJI M30

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<sup>4</sup> <https://www.avss.co/>

<sup>5</sup> <https://www.dronavia.com/en/>

<sup>6</sup> <https://parazero.com/>

<sup>7</sup> Applies to the following DJI Mavic 3 models: Pro, Cine, Pro Cine, E (without RTK module), T, Classic, Multispectral