REGULATIONS: DRONE USER HANDBOOK

Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

Our Public Service

SMART DUBLIN

Contents:

1. Introduction.

EU Unmanned Aircraft System (UAS) regulations were adopted by the European Commission and published in the Official Journal of the European Union on the 11 June 2019. The new regulations became fully applicable on the 01 Jan 2021.

The UAS regulatory package includes two distinct but interlinked regulations.

- **Regulations (EU) 2019/947** on the procedures and rules for the operation of unmanned aircraft. This regulation is also referred to as the Implementing Regulation and essentially outlines the rules for operating unmanned aircraft including operational limitations and remote pilot competency.
    - Link to Regulation (EU) 2019/947.

- **Regulation (EU) 2019/945** on unmanned aircraft systems and on third-country operators of unmanned aircraft systems. This regulation is also referred to as the Delegated Regulation and principally outlines the technical standards to which small-unmanned aircraft shall be designed and manufactured.
    - Link to Regulation (EU) 2019/945.

The new UAS regulations are applicable EU wide. Flight rules and limitations are now standardised. Regulations are also harmonised meaning registrations, permissions, and certificate issuances in one EU member state are valid in the next. This facilitates a greater EU market and promotes growth within the European UAS industry. In Ireland, EU regulation 947 and EU regulation 945 overrule, and replace *S.I. No. 563/2015 - Irish Aviation Authority (Small Unmanned Aircraft (Drones) and Rockets) Order, 2015*. For clarity, SI No. 563/2015 is **no longer** the legal document governing the use of unmanned aircraft in Ireland.

2. Purpose of this document.

Unmanned Aircraft Systems (UAS) are increasingly being used by the Local Authority sector. This document serves as a practical guide to European UAS regulations for readers and provides a simple explanation of the general intent of the regulations. The guide is not designed or intended to be a replacement for the UAS regulations and should be read in conjunction with the regulatory documents themselves.

This handbook was developed by Safe Drone Academy on behalf of Dublin City Council.

3. Agency Overview.

European Commission (EC)

The European Commission (EC) is the European Unions (EU) executive arm. In consultation with the European Parliament and European Council, the EC adopted into law the UAS Regulation.

European Union Aviation Safety Agency (EASA)

EASA is the EU's agency responsible for ensuring civil aviation safety throughout the EU. It is established under European law. Its role is to advise the EU legislator on regulation relating to aviation. Additionally, EASA provides guidance and means of complying with European aviation regulation to the civilian aviation industry including unmanned aviation.

- Link to EASA Easy Access Rules for Unmanned Aircraft Systems
- Link to EASA UAS website

Irish Aviation Authority (IAA)

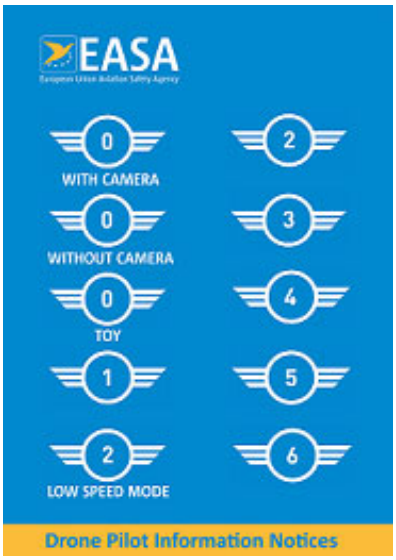
The IAA is Ireland's aviation authority and designated national competent authority on matters relating to European aviation regulation. The IAA administers and enforces national and European aviation regulation in Ireland and designates and regulates national airspace that may be used for aviation activities. The IAA issues all certificates, permissions and registrations related to aviation activities in Ireland.

- Link to IAA UAS website

4. Regulation Overview.

Regulation (EU) 2019/947 lays down the rules of the air for the operation of unmanned aircraft and divides the UAS industry into three (3) categories of operation based on the type and complexity of UAS operations and the associated operational risk. These categories of operation are the **Open, Specific,** and **Certified**, categories of operation. The regulation also outlines detailed provisions for the training of remote pilots and registration of UAS operators.

Regulation (EU) 2019/945 primarily focuses on technical aspects of UAS. The regulation lays out new requirements for the design, manufacture and retailing of UAS, primarily focusing on UAS to be used under low-risk conditions. This regulation introduces the concept of ***Class*** identification labelling (*C-Markings*) that shall be affixed to UAS meeting the defined product standard. UAS not meeting the requirement of the regulation are referred to as ***'legacy'*** unmanned aircraft. These *'legacy'* aircraft include unmanned aircraft in use with many Local Authorities today. At the time of compiling this guidance document (December 2021), the *'C-Marking'* Acceptable Means of Compliance (AMC) standards documentation augmenting the regulation is not available for UAS manufacturers and so no '*C-Marked'* unmanned aircraft are currently available.



Class Identification Labels will be affixed to unmanned aircraft meeting the product standards of Regulation (EU) 2019/945.

5. Concepts of Operation.

The principle of the operation of unmanned aircraft is defined by two broad concepts of operation. It should be noted that while the regulations are aviation safety centric, due to the unique capabilities of UAS, the regulations also consider wider security, privacy, and data protection elements.

Operation Centric: Regulations focus on the operation being conducted and not on who is conducting the operation, or why the operation is being conducted. The consequences of an operation and category of operation are therefore dependent on the environment where the operation is taking place. This results in there being no distinction between recreational, commercial, research and/or public sector operations.

Risk Based: Regulations focus on the risk or complexity of operations. Where risk or complexity is increased, the operation may fall into a higher category of operation. The higher the category of operation, the greater the regulatory oversight. As risk increases, a UAS Operator will be required to employ ever more increasing operational and technical mitigation to reduce risk.

In practice this can mean a larger aircraft operating in isolated areas is considered a low-risk operation. Whereas a smaller aircraft operating close to an airport or large group of people is considered a higher risk operation.

The two main risks considered are.

Ground Risk:	Collision risk with persons/objects on the ground.
Air Risk:	Collision risk with aircraft, manned and unmanned, in the airspace.

6. Categories of Operation.

The concept of operation divides the EU UAS industry into three (3) main categories of operation.

Open Category – Low or no risk operations. The open category is characterised by simple rules followed by a sufficiently competent and trained remote pilot. No authorisation from an aviation authority is required

to conduct operations. Local authorities will need to register as a UAS Operator to conduct Open category operations.

Specific Category – Medium to high-risk operations or more complex operations that fall outside the limitations of the Open category. Specific category operators require an ***'authorisation'*** to operate from an aviation authority. The authorisation is based on a risk assessment and submission of an Operations Manual that outlines operational procedures. The Specific category is similar in concept to the old Irish Specific Operations Permit (SOP). However, the regulatory requirements and technical and operational risk mitigations are more extensive and demanding. Local authorities will need to register as a UAS Operator to conduct Specific category operations.

Certified Category – Most complex operations that present a very high risk similar to manned aviation and so are subject to the same regulatory oversight. Local authorities will need to register as a UAS Operator to conduct Certified category operations. Additionally, unmanned aircraft used will be certified to defined standards and individually registered. The remote pilot will also require extensive formal training and licensing. Currently, it is highly unlikely a Local Authority will need to conduct operations in the certified category.

7. UAS Operators & Remote Pilots.

Regulation (EU) 2019/947 outlines different responsibilities for both the UAS Operator and the Remote Pilot.

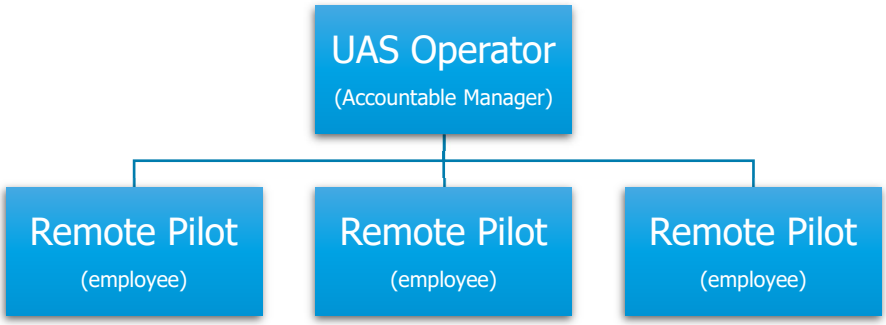
A UAS Operator is a ***'natural person'*** (e.g., recreational pilot, sole trader) or a ***'legal person'*** (e.g., Local Authority, limited company) operating or intending to operate one or more UAS. A Local Authority is considered a *'legal person'* UAS Operator.

A remote pilot is a ***'natural person'*** with responsibility for safely conducting a flight, either manually or when the unmanned aircraft flies under autopilot, by monitoring its course and remaining always ready to intervene if something goes wrong.

A Local Authority, for example a County Council, will be designated as a UAS Operator. Each individual Local Authority is required to appoint a senior manager known as an ***''Accountable Manager''*** who will manage the UAS Operator's responsibilities.

A Local Authority employee will be designated as a Remote Pilot. The Remote Pilot will need to meet the minimum competency standard of the category of operation in which they operate (e.g., Open/Specific). The Remote Pilot is responsible for the safe and legal conduct of the UAS operation from the moment the unmanned aircraft is capable of flight until the end of the flight with the primary propulsion system shut down.

To help with your understanding of this UAS Operator vs Remote Pilot principle, it is useful to think of the UAS Operator as you would a commercial 'manned' airline. An airline operator (equivalent to the UAS Operator) has all the responsibilities of managing and running the airline including defining operational procedures, maintaining aircraft, training, and rostering pilots to fly the airline's aircraft. The airline's pilots (equivalent to the remote pilot) are not responsible for running the airline but are responsible for the safe conduct of flying operations.



8. UAS Operator Registration.

Article 14 of Regulation (EU) 2019/947 outlines a requirement for UAS Operators to register their operation if it presents a risk to safety, security, privacy, personal data, or the environment.

In practice this means a UAS Operator shall register their operation if they use an unmanned aircraft with a maximum take-off weight of 250g or greater or the unmanned aircraft has a sensor capable of recording personal data (e.g., imagery, sound). Article 14 encompasses the majority of the current UAS market. Thus, Local Authorities will more than likely need to register as a UAS Operator with the Irish Aviation Authority (IAA).

The EU registration process is different to the Irish registration system in place prior to 2021. The Irish registration process required the physical UAS (drone) to be registered and not the UAS Operator. The Irish

registration process is now cancelled, and Irish registration details affixed to unmanned aircraft should be removed.

Once registered under the EU registration system, a UAS Operator will be provided with a registration number. The UAS Operator shall display their registration number on every unmanned aircraft in their use. Thus, the same UAS registration number will be affixed to the multiple UAS in operation with the Local Authority.

For clarity, a Local Authority is a *'legal person'* operator. In practice this means legally the Local Authority itself must register. Individual departments (e.g., County Council environment & transport depts.) are not *'legal persons'* and so cannot register. Current Local Authority departments/sub-sections operating UAS under the provisions of Irish regulation now need to ensure the Local Authority itself is registered.

Registration is valid across the wider EU. The registration number takes the form of sixteen (16) alphanumerics arranged where the first three (3) uppercase letters represent the code of the EU Member State of registration, and the following thirteen (13) lowercase randomly generated characters consist of the remaining alphanumeric.

Example of the UAS Operator registration certificate. Note the Registration number.
This alphanumeric here should be affixed to the frame of all unmanned aircraft used by a UAS Operator.

Registration expiration - Currently, in Ireland, registration can be acquired for one (1) or two (2) years. The UAS Operator is required to re-register before the expiry date of the current registration period.

Registration is completed with the Irish Aviation Authority (IAA). The IAA have a new online portal, MYSRS (My Safety Regulatory System). UAS Operator registration is completed by a MYSRS account holder. In practice this means the Local Authority designated *'Accountable Manager'* is required to open an account within MYSRS and then register the Local Authority as a UAS Operator.

- https://iaa.mysrs.ie

UAS Operator Registration Number – Points to Note

1. Registration number is affixed to the outer frame of each unmanned aircraft.
2. Registration number must always remain clear and legible.
3. When the unmanned aircraft is on the ground the registration number must be readable without aid other than eyeglasses or corrective lenses.
4. A QR (quick response) code may be used instead of the alphanumeric string.
5. If airframe size is an issue, the registration number may be placed in the battery compartment.
6. If an electronic registration broadcast system is available, the registration number must additionally be uploaded to it.

9. IAA Complex UAS Organisation.

UAS Operators may be *'natural person'* or *'legal person'* operators. A Local Authority is designated as a *'legal person'*. Local Authority departments and subsections have no legal status and so legally cannot act as individual UAS operators

This legal requirement is a significant departure from previous Irish regulation (SI563/2015). Under Irish regulation it was possible for individual Local Authority departments (environment, transport etc.) to apply for legal permission to operate (*Specific Operations Permit)* and remain as a separate entity within the wider Local Authority structure.

An individual must be responsible for ensuring a UAS Operator meets its legal obligations. This person is referred to by aviation authorities as the ***'Accountable Manager'.*** As such, an individual within the Local Authority must be designated as the person responsible for managing the entire Local Authority UAS operation and ensure obligations are met.

The Irish Aviation Authority (IAA) recognize the size and diverse nature of Local Authority operators. The IAA appreciate it may be difficult for a single *'Accountable Manager'* to manage the entire Local Authority operation. As such, the IAA have introduced a complex organisation delegated control and registration process Local Authorities will find useful as a practical solution to the EU regulatory requirements.

The IAA guidance still requires a single *'Accountable Manager'* to remain responsible for the Local Authority's common UAS polices and processes that apply to all UAS operations within a Local Authority. This entity is referred to as the ***'Parent Entity'***. However, the IAA's complex organisations process additionally permits ***'Sub-Entity'*** units to be established. These *'Sub-Entity'* units are subordinate to the *'Parent Entity'* and can be delegated more localized command and control of a UAS operation.

Each *'Sub-Entity'* is required to nominate a ***'UAS Responsible Person'***. The *'UAS Responsible Person'* reports directly to the *'Accountable Manager'* but may lead a *'Sub-Entity'* unit. The *'Sub-Entity'* unit is then free to manage their own independent UAS operation, apply for individual '*authorisations'*, apply for their own individual UAS Operator registration number, and operate to their own distinct procedures.

'Parent Entities' and *'Sub-Entities'* will have individual UAS Operator registration numbers. *'Sub-Entity'* registration details will be linked to the *'Parent Entity'*.

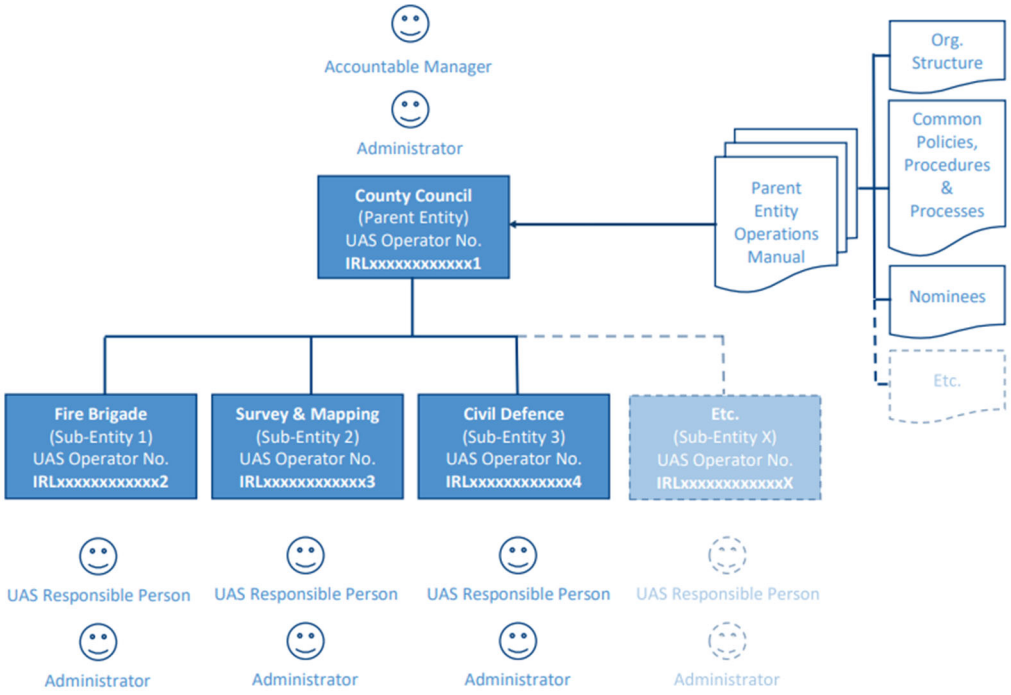
This system will allow Local Authority departments operate similarly to the previous Irish regulatory setup and allow a degree of autonomy. However, legally the *'Accountable Manager'* will still retain overall responsibility and consequently should maintain a degree of oversight.

By default, the '*Parent Entity'* should have the CEO, or equivalent, as the *'Accountable Manager'*. An alternative may be appointed by a director of the company, by letter, on headed paper.

At the *'Sub-Entity'* level, any competent person may take the role of *'UAS Responsible Person'*. This person should be capable of managing the 'Sub-Entity', but it does not have to be a department head.

The IAA's **UAS Advisory Memorandum (UAM) 003 'Guidance on UAS Operator Registration for Complex Organisations'** can be found at the following link.

- UAM 003 - Guidance on UAS Operator Registration for Complex Organisations.



Example Local Authority organisation structure as outlined in UAM003.

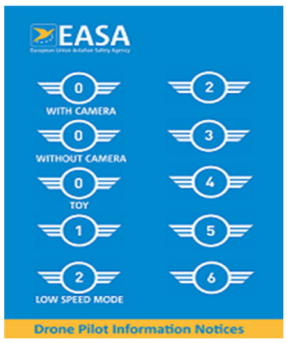
10. *'Legacy'* vs *'C Marked'* Unmanned Aircraft.

Regulation (EU) 2019/945 adopted new technical standards for unmanned aircraft intended for use primarily in the Open category and lower risk operations of the Specific category.

Unmanned aircraft designed and manufactured to meet these technical requirements may have a Class Identification label ('*C Marking*') affixed to the unmanned aircraft by the manufacturer.

Class standards are designed to improve the overall safety of unmanned aircraft, set minimum capabilities, and harmonise the standard of manufacturing and retailing of unmanned aircraft within the EU.

There are five (5) separate UAS Classes identified for Open category operations and two (2) for Specific category operations.



C Marking	Category
C0, C1	Open A1
C2	Open A2
C3, C4	Open A3
C5, C6	Specific Category

Aircraft not designed and manufactured to meet the requirement of Regulation (EU) 2019/945 are referred to as ***'legacy'*** aircraft. These '*legacy*' aircraft are the current unmanned aircraft in use by Local Authorities today (e.g., DJI Mavic 2 series, DJI Phantom series).

'Legacy' unmanned aircraft may also operate in the Open category in accordance with **Article 20** and **Article 22** of Regulation (EU) 2019/947.

Article 20 Operations: '*Legacy*' unmanned aircraft placed on the market before **01 Jan 2023** may operate in the Open category after 01 Jan 2023 with the following restrictions.

- *'legacy'* unmanned aircraft with max weights below 250g may operate in Open subcategory A1.
- *'legacy'* unmanned aircraft with max weights between 250g and less than 25kg may operate in Open subcategory A3.

Article 22 Operations: Without prejudice to Article 20, for a ***'Transition Period'*** ending on 01 Jan 2023, '*legacy*' unmanned aircraft may operate with reduced restrictions in the Open category. This means more scope to operate 'legacy' unmanned aircraft within the Open category than is permitted under Article 20. (See Section 12.1, 12.2, 12.3 A1, A2, A3 Transition sections).

Post the *'Transition Period'*, *'legacy'* unmanned aircraft may operate as per Article 20 Operations only.

Unmanned Aircraft	Article 22 – Before 01 Jan 2023	Article 20 – After 01 Jan 2023
'Legacy'	Transition Period. Operate in Open A1, A2 and A3	<250g – Open A1 Only 250g - <25kg – Open A3 Only

Without restriction, '*legacy*' unmanned aircraft may continue to operate in the Specific category, subject to the requirements of a risk assessment.

11. Uninvolved Persons & Assemblies of People.

When considering ground risk, EU UAS Regulations consider the exposure of the general population to the unmanned aircraft operation. Two categories of persons are defined.

Uninvolved Persons are persons who are not participating in the UAS operation or who are not aware of the instructions and safety precautions given by the UAS operator. The remote pilot must always ensure they maintain the unmanned aircraft at a safe distance from uninvolved persons.

Assemblies of People are gatherings where persons are unable to move away due to the density of the people present. Importantly, unlike previous Irish regulation, an assembly of people is not defined by the number of people present but defined by the 'density' of the group. This means even a very small number of people could represent an assembly of people.

A crowd of spectators gathered for a sporting event would be defined as an assembly of people but so too could a busy commercial street. Due to the increased risk, a remote pilot must never conduct unmanned aircraft operations over an assembly of people.

12. Open Category Operations.

Open category operations cater for **low-risk** operations.

There are several basic rules Open category operations are limited by:

- The maximum take-off mass (MTOM) of the unmanned aircraft must be less than 25kg.
- Operations are conducted in Visual Line of Sight (VLOS) only. The remote pilot must always be able to see the aircraft while it is airborne.
- The unmanned aircraft must not be flown further than 120m (400ft approx.) from the closest point of the earth's surface.
- Depending on the sub-category of operation, the unmanned aircraft must be maintained at a minimum safe horizontal distance from uninvolved persons.

The Open Category is further divided into three (3) operational subcategories; ***Open A1***, ***Open A2*** & ***Open A3.*** Which subcategory operations may be conducted in depends on:

- Max weight of '*legacy*' unmanned aircraft.
- C Marking on the unmanned aircraft (when available on the market).
- The competency of the remote pilot. Only Open A2 qualified remote pilots may operate in Open A2.

Unlike the Specific category, a UAS Operator (Local Authority *'Parent Entity'* or *'Sub-Entity'*) in the Open category does not require an *'authorisation'* to operate from the aviation authority. The UAS Operator needs to be registered, and the UAS Operator's remote pilots need to be appropriately competent for the subcategory of operation.

Remote pilots operating within the Open category must comply with the basic rules of the Open category and keep the unmanned aircraft at the safe horizontal distance from uninvolved persons defined by the subcategory of operation (A1, A2 or A3).

Additionally, there are certain Geographic Zones that may prohibit or restrict Open category operations. Where this is the case, a Local Authority may need to operate in the Specific category. (See Geographic Zone section).

12.1. A1 Subcategory – Fly 'over' People.

Very low risk of harm to *'uninvolved persons'* due to the very low weight of unmanned aircraft permitted for use in the subcategory.

Category	Aircraft Type	Distance From Uninvolved Persons	Flight Over Assemblies of People	Operating Area	Operating Airspace	Pilot Competency
A1 Transition Period	*'legacy'* <500g* *(Article 22 Operations)*	No Intentional Flight Overhead People	Not Permitted	Populated & Sparsely Populated	Uncontrolled Airspace Controlled Airspace within Height Restriction Zones. Some Restricted or Prohibited Geographic Zones with Permission from the Controlling Authority (e.g., Prison Service)	A1/A3 Proof of Online Training Certificate
A1	Private Built <250g <19m/s	Fly Overhead				Read User Manual
	'*legacy*' *(placed on market before 01 Jan 2023)* <250g *(Article 20 Operations)*	Fly Overhead				Read User Manual
	C0** 	Fly Overhead				Read User Manual
	C1** 	No Intentional Flight Overhead People				A1/A3 Proof of Online Training Certificate
	** From **01 Jan 2023** the Transition Period ends, and 'legacy' unmanned aircraft placed on the market before 01 Jan 2023 weighing 250g or greater are restricted to A3 Subcategory only (Article 20 Operations).* ***C Class unmanned aircraft may not be available on the market until late 2022 or after.*					

12.2. A2 Subcategory – Fly 'close to' People.

This subcategory permits use of a larger and more capable unmanned aircraft. Risk is reduced and considered low by a requirement to keep the unmanned aircraft at safe minimum horizontal distances from *'uninvolved persons'* and *'assemblies of people'* and for the remote pilot to successfully meet additional competency standards.

Category	Aircraft Type	Distance From Uninvolved Persons	Flight Over Assemblies of People	Operating Area	Operating Airspace	Pilot Competency
A2 Transition Period	'*legacy*' 500g to <2kg* *(Article 22 Operations)*	50m Horizontally	Not Permitted	Populated & Sparsely Populated	Uncontrolled Airspace Controlled Airspace within Height Restriction Zones. Some Restricted or Prohibited Geographic Zones with Permission from the Controlling Authority e.g., Prison Service	Open A2 Certificate of Competency
A2	C2** 	30m Horizontally 5m with Low-Speed Mode				
	** From **01 Jan 2023** the Transition Period ends, and 'legacy' unmanned aircraft placed on the market before 01 Jan 2023 weighing 250g or greater are restricted to A3 Subcategory only (Article 20 Operations).* ***C Class unmanned aircraft may not be available on the market until late 2022 or after.*					

12.3. A3 Subcategory – Fly 'far from' People.

This category is low risk as it requires large and heavy unmanned aircraft to be flown in flight areas that are far from residential, commercial, industrial, and recreational areas. Risk is further reduced by a requirement for no uninvolved persons to be present in the flight area.

<table>
<tr><th>Category</th><th>Aircraft Type</th><th>Distance From Uninvolved Persons</th><th>Flight Over Assemblies of People</th><th>Operating Area</th><th>Operating Airspace</th><th>Pilot Competency</th></tr>
<tr><td>A3 Transition Period</td><td>'legacy' to <25kg
(Article 22 Operations)</td><td rowspan="4">No uninvolved person in the flight area.</td><td rowspan="4">Not Permitted</td><td rowspan="4">Flight area 150m horizontally from Residential, Commercial, Industrial & Recreational areas.</td><td rowspan="4">Uncontrolled Airspace

Controlled Airspace within Height Restriction Zones.

Some Restricted or Prohibited Geographic Zones with Permission from the Controlling Authority e.g., Prison Service</td><td rowspan="4">A3 Proof of Online Training Certificate</td></tr>
<tr><td rowspan="3">A3</td><td>Private Built
250g to <25kg</td></tr>
<tr><td>C3* 
&
C4*  </td></tr>
<tr><td>'legacy' (placed on market before 01 Jan 2023)
250g to <25kg**
(Article 20 Operations)</td></tr>
<tr><td></td><td colspan="6">*C Class unmanned aircraft may not be available on the market until late 2022 or after.
** From 01 Jan 2023.</td></tr>
</table>

12.4. Subcategories by '*legacy*' Unmanned Aircraft Type.

'*Legacy*' unmanned aircraft are those aircraft not complying with Regulation (EU) 2019/945. These are the unmanned aircraft being used by Local Authorities today (2021).

'C Marked' unmanned aircraft do comply with Regulation (EU) 2019/945. These aircraft meet the specific technical standards outlined in the regulation. At the time of compiling this guidance document, Dec 2021, no *'C Marked'* unmanned aircraft are available.

The following table is designed to aid Local Authorities determine what Open subcategory its unmanned aircraft may be operated in. Where a '*legacy*' unmanned aircraft is not referred to in the table, use Column 1 (*'Legacy' Unmanned Aircraft Weight)* to determine the subcategory.

For the consideration of Regulation (EU) 2019/947 Article 20, the aircraft listed in Column 2 *(Unmanned Aircraft)* have all been placed on the market prior to 01 Jan 2023.

'*Legacy*' Unmanned Aircraft Weight	Unmanned Aircraft	Subcategory	Notes
<250g	DJI Mavic Mini DJI Mini 2 Autel Nano Hubsan Zino Mini Pro	A1	- Fly Overhead People. - Remote Pilot must read user manual.
250g to <500g	DJI Spark DJI Air Parrot Anafi Yuneec Breeze Yuneec Mantis G	A1	- No Intentional Flight Overhead People. - Remote Pilot must hold the Open A1/A3 Proof of Online Training certificate. - **Open A3 from 01 Jan 2023.**
500g to <2kg	DJI Mavic Pro/Platinum DJI Mavic 2 Pro/Zoom DJI Mavic Enterprise/Adv DJI Phantom 2/3/4 Autel Lite Autel Evo/Evo 2 Autel Evo 2 E/RTK/Dual Yuneec Typhoon Sensefly eBee Series Parrot Anafi USA	A2	- 50m horizontal distance from uninvolved persons. - Remote Pilot must hold Open A2 Certificate of Competency otherwise operate in Open A3. - **Open A3 from 01 Jan 2023.**
2kg to <25kg	Yuneec H520 DJI Inspire 1/2 DJI Matrice 200/210 DJI Matrice 300 DJI Matrice 600 DJI Wind	A3	- Flight area 150m from residential, commercial, industrial, and recreational areas. No uninvolved persons in the flight area. - Remote Pilot must hold the Open A1/A3 Proof of Online Training certificate.

12.5. Open Category Remote Pilot Training.

Unless using sub 250g unmanned aircraft there is a regulatory requirement for remote pilots to partake in a minimum amount of training.

Depending on the desired subcategory of operation, remote pilots are required to hold a valid remote pilot certificate.

Where a remote pilot certificate is required, remote pilots must open an account with the IAA's MYSRS online portal. Remote pilot certificates are issued via this portal.

Open A1/A3 training requirements are met through a training program within MYSRS.

Open A2 training requirements are met through commercial UAS schools referred to as Declared UAS Training Organisations (DUTO). DUTOs are recognised entities within the meaning of the UAS regulations.

Subcategory	Type of Training	Where	Award	Validity	Notes
A1/A3	Open A1/A3 Proof of Online Training	Online - IAA MYSRS	Open A1/A3 Proof of Online Training	5 Years	- 9 core subject areas. - 40 multiple choice question online exam (MYSRS). - Each remote pilot will be required to open an account with the IAA's MYSRS online portal.
A2	Open A2 Certificate of Competency	Declared UAS Training Organisation (DUTO) – Commercial UAS School	Open A2 Certificate of Competency	5 Years	- 3 additional subject areas covered over A1/A3. - 30 multiple choice question exam. - Self-practical training. - IAA issue Open A2 Certificate of Competency on recommendation of DUTO. - Remote pilot must first hold the Open A1/A3 Proof of Online Training certificate.

12.6. Subcategory Advantages & Disadvantages.

Subcategory	Operation Types	Advantages	Disadvantages
A1	- Simple photography & videography. - Basic building survey (visual spectrum only).	- Simple remote pilot training. - Safe & easy operation in built-up areas as no minimum distance to people required. - Inexpensive equipment. - Highly portable equipment.	- Short range operations due to requirement to keep very small aircraft in Visual Line of Sight (VLOS). - Shorter flight times. - Limited resistance to wind & rain. - Some Geographic Zones are prohibited or restricted for Open category operators. - Fixed visual camera payloads only.
A2	- Photography & Videography. - Building surveying (Visual & Thermal). - Land survey & mapping (visual, thermal, multispectral photogrammetry). - Basic building & infrastructure survey and mapping (visual, thermal photogrammetry). - Basic surveillance with limited optical zoom capabilities.	- Comprehensive remote pilot training. - Larger aircraft with more advanced visual optics (visual, thermal, multispectral). - Improved wind performance. - Operate at longer ranges. Larger aircraft easier to maintain Visual Line of Sight (VLOS). - Relatively inexpensive equipment cost. - Longer flight times 20mins+ - Portable equipment.	- 50m (30m with C2) minimum horizontal distance from uninvolved persons can make it difficult to operate in built up areas. - Some Geographic Zones are prohibited or restricted for Open category operators. - Fixed or limited payload capability.
A3	- Advanced photography & videography. - Advanced land survey & mapping, including lidar. - Heavy lift capability. - Additional sensor capability (e.g., water, air, gas sampling). - Advanced surveillance with advanced optical capabilities.	- Interchangeable payloads. - Advanced sensor (visual, thermal, multispectral, lidar, sampling). - Improved wind capability. - Potential for precipitation protection (i.e., IP rated). - Long range Visual Line of Sight Operations (VLOS).	- Limited operational areas (150m horizontal distance from Residential, Commercial, Industrial and Recreational areas). No *'uninvolved persons'* within the flight area. - Equipment is not easily portable. - Expensive equipment. - Complex equipment.

13. Specific Category Operations.

Specific category operations cater for medium to high-risk operations.

The simplest explanation of the Specific is that it may permit an operation that cannot be completed within the limitations of the Open category.

Of note, unlike the Open category, the Specific category requires a UAS Operator to acquire an ***'authorisation'*** to operate from an aviation authority.

The *'authorisation'* is based on a risk assessment and must be in place prior to commencing operations.

Examples of Specific category operations include,

- Operations in *'geographic zones'*/controlled airspace areas not permitted within the Open category.
- Beyond Line-of-Sight Operations (BLOS).
- Operations greater than 120m (400ft) from the closest point of the earth's surface.
- Operations utilising aircraft greater than 25kg.
- Operation of larger unmanned aircraft in built-up areas. (Heavier than 4kg).
- Operations where payloads are dropped e.g., agricultural, horticultural, forestry, marine etc.
- Package delivery operations.

Remote pilots operating in the Specific category must meet the competency standard defined in the UAS Operators *'authorisation'*. This often means completing a remote pilot Specific category theory and practical course.

Remote pilots operating within the Specific category must comply with the procedures and limitation of the UAS Operators *'authorisation'* and their operations manual.

Regardless of the type of unmanned aircraft operated, all Specific category UAS Operators must be registered.

13.1. Risk Assessment.

An *'authorisation'* to operate in the Specific category is based on a risk assessment. The risk assessment should comply with Article 11 of Regulation (EU) 2019/947. The risk assessment outlines the,

- **Concept of Operation.** The type of operation, how it will be conducted, by whom, and where.

- **Safety Assessment.** Operational and technical risk mitigation strategies that make the operation safe.

The means to using a risk assessment to obtain an *'authorisation'* include,

- UAS operator provided risk assessment.
- EASA provided risk assessment.
- Light UAS Operator Certificate (*'LUC'*)

13.2. UAS Operator provided risk assessment.

For uncommon operation types (e.g., UAS package delivery operations) or complex UAS operations, the UAS Operator may need to complete a unique risk assessment. The risk assessment must follow the ever evolving **'*Specific Operations Risk Assessment*' (*'SORA'*)** process.

The risk assessment is submitted to the aviation authority, with all supporting documentation. If the aviation authority is satisfied with the assessment, it will issue an *'authorisation'*.

The *'SORA'* is a 10-step process that includes the concept of operation definition, ground and air risk categorisation, an overall risk rating and operational safety objectives. Without inhouse expertise, Local Authorities may require external consultation to develop a *'SORA'*.

13.3. Pre-Defined Risk Assessment (PDRA).

For more common operation types, EASA publishes ***'PDRA'*** which are completed risk assessments that permit operations within defined operational and technical limitations.

If an UAS Operator's intended operation is feasible within the published procedures and requirements of the *'PDRA'*, then an application to the aviation authority, with supporting documentation (operation manual), can be made and an *'authorisation'* is issued based on the *'PDRA'*.

The *'PDRA'* system is expected to be the most common method UAS Operators will utilise to acquire an *'authorisation'* in the Specific category. EASA intends to publish many common operational scenarios under the *'PDRA'* system. There are currently four (4) *'PDRA'* published permitting various types of operation.

The table below outlines the basic technical and operational limitations of the currently published *'PDRA'*. A full published document outlines the detailed requirements to be followed. If a UAS Operator can conduct

their photography/videography operations within the defined limits, they are free to make an application under the *'PDRA'* system.

'PDRA' S01 is expected to be a popular choice amongst Local Authorities.

	Technical Limitations*	Operational Limitation				
Name	**UAS**	**VLOS/BLOS**	**Overflown Area**	**Range from Remote Pilot**	**Height**	**Airspace**
***'PDRA'* S01**	<25kg <3m Wingspan No Fixed-wing unless tethered.	VLOS	Controlled Ground Area in Populated & Sparsely populated areas.	VLOS Range	120m	Controlled & Uncontrolled Airspace
***'PDRA'* S02**	<25kg <3m Wingspan	BLOS	Controlled Ground Area Sparsely populated areas.	2km BLOS with Airspace Observer. 1km BLOS without Airspace Observer.	120m	Controlled & Uncontrolled Airspace
***'PDRA'* G01**	<34 kJoules <3m Wingspan	BLOS	Sparsely populated area.	Unlimited BLOS with multiple Airspace Observer. 1km BLOS without Airspace Observer.	150m	Uncontrolled
***'PDRA'* G02**	<34 kJoules <3m Wingspan	BLOS	Sparsely populated area.	No Limit	As per a Reserved or Restricted Airspace	Reserved or Restricted Airspace

*These are the minimum technical limitations. Additional technical limitations often include a requirement for the unmanned aircraft to have an independent Flight Termination System (FTS) and impact dynamic reduction capabilities. See technical mitigation section.

13.4. Light UAS Operator Certificate (*LUC*).

The *'LUC'* is a capability awarded to a UAS Operator (Local Authority).

A Local Authority may apply to the Irish Aviation Authority (IAA) to assess whether the Local Authority is competent enough to assess the risk of an operation inhouse, and *'authorise'* their own operations.

Where the aviation authority is satisfied with the competency of the Local Authority, they may issue a *'LUC'* to the Local Authority. The *'LUC'* will outline what 'authorising' privileges the Local Authority has but at a minimum should enable the Local Authority to 'authorise' *'PDRA'*s and to conduct operations using the

Standard Scenario system (see below). In some cases, the most competent Local Authorities may be able to authorise their own operations using the *'SORA'* process.

The requirements to meet for the award of the *'LUC'* are defined within Regulation (EU) 2019/947.

13.5. Standard Scenarios.

For some lower risk Specific category operations, the regulations introduce a concept referred to as ***'Standard Scenarios'***.

Like the *'PDRA'* system, a set of highly defined operational and technical requirements outline the type of operation that may be conducted.

However, unlike the *'PDRA'* system, the *'Standard Scenarios'* require a *'C Marked'* unmanned aircraft (C5, C6) is used and *'legacy'* unmanned aircraft are not permitted.

The *'Standard Scenario'* is therefore highly prescriptive. Consequently, the UAS Operator is only required to ***'declare'*** to the aviation authority an intention to use the *'Standard Scenario'* process. The *'declaration'* system means no operations manual, or risk assessment is submitted to the aviation authority. The application process is therefore very simple and fast. The burden of responsibility is on the UAS Operator to comply with the full requirements of the *'Standard Scenario'*.

The UAS Operator should understand that unlike the *'PDRA'* which are developed through an EASA risk assessment, the *'Standard Scenarios'* are directly defined in the regulation and as such are 'hard law'.

The 'Standard Scenario' process will not be available until **December 2023**. This is a result of the requirement to use *'C Marked'* aircraft (C5, C6) which are currently not available.

Regulation (EU) 2019/947 provides for two (2) Standard Scenarios (STS01 & STS02). STS 01 & STS 02 are identical to PDRA S01 and PDRA S02 except for the legal requirement to utilise *'C Marked'* unmanned aircraft.

	Technical Limitations	Operational Limitation				
Name	**UAS**	**VLOS/BLOS**	**Overflown Area**	**Range from Remote Pilot**	**Height**	**Airspace**
***'Standard Scenario'* S01 (STS01)**	C5	VLOS	Controlled Ground Area in Populated & Sparsely populated areas.	VLOS Range	120m	Controlled & Uncontrolled Airspace

***'Standard Scenario'* S02 (STS02)**	C6	BLOS	Controlled Ground Area Sparsely populated areas.	2km BLOS with Airspace Observer. 1km BLOS without Airspace Observer.	120m	Controlled & Uncontrolled Airspace

13.6. Technical Mitigation.

The *'PDRA'* and *'SORA'* process introduce a level of unmanned aircraft technical requirements UAS Operators must comply with.

Before the aviation authority can issue an *'authorisation'* in the Specific category, the UAS Operator must indicate compliance with the technical mitigation. This indication is affirmed on application for an *'authorisation'* and through procedures outlined in the operations manual.

In many cases, including operations under PDRA, unmanned aircraft are required to have an independent *Flight Termination System (FTS)* and include means to reduce the effect of the unmanned aircraft's impact dynamics.

The *FTS* may be used by the remote pilot to terminate the flight in situations where the unmanned aircraft is unintentionally leaving the operations area. This out-of-control situation may arise from technical, environmental, or human related issues. The FTS provides the remote pilot with an independent redundant means of control over the unmanned aircraft, to terminate the flight. The FTS prevents the out-of-control situation escalating further, by ensuring the unmanned aircraft cannot enter undesired adjacent ground areas and/or airspace. The FTS often takes the form of a second radio controller connected to the unmanned aircraft that when triggered, causes the motors on the unmanned aircraft to stop rotating.

To reduce the effect of the unmanned aircraft's impact dynamics often requires use of parachutes or other means to reduce the fall rate of the aircraft and so reduce the impact energies of a crash. In addition to reducing crash impact energy, these systems are considered important as remote pilots are more likely to use the *FTS* when there is a reduced fear of the outcome.

By requiring these systems, UAS Operators are mitigating risk to acceptable levels making it possible to conduct increased risk Specific category operations. The outcome of the situation is highly considered and not reliant on good fortune.

For common UAS in operation today, 3rd party FTS and parachute systems are available.

13.7. Specific Category Remote Pilot Training.

Remote pilots operating in the Specific category are required to meet the competency standard outlined in the risk assessment.

PDRA and STS define a minimum competency standard based on,

- Theory course.
- Theory exam.
- Practical skill assessment.

Where a remote pilot certificate is required, remote pilots must open an account with the IAA's MYSRS online portal. Remote pilot certificates are issued via this portal.

Open A1/A3 training must be conducted by a remote pilot prior to attending a Specific category course. Open A1/A3 training is conducted through the Irish Aviation Authority's (IAA) MYSRS system.

Specific category training requirements are met through commercial UAS schools referred to as Declared UAS Training Organisations (DUTO). DUTOs are recognised entities within the meaning of the UAS regulations.

Risk Assessment	Type of Training	Where	Award	Validity	Notes
PDRA/STS	Theory & Practical	Open A1/A3 Online - IAA MYSRS. Specific category theory - DUTO	**Theory** Remote Pilot Certificate of Theoretical Knowledge **Practical** Certificate of Completion of Practical Skill Training.	5 Years	- 9 core subject areas enhanced with additional course material. 4 additional subject areas - 40 multiple choice question exam (MYSRS). - Each remote pilot will be required to open an account with the IAA's MYSRS online portal. - Theory certificate issued by the IAA through MYSRS on recommendation of DUTO. - Practical certificate issued by DUTO.
SORA	As defined by risk assessment to include Theory & Practical	Open A1/A3 Online - IAA MYSRS. Specific category theory - DUTO	As required	As required	- Risk assessment will define training requirement. It is expected that as a minimum, the PDRA/STS course may be required. - Depending on operation, 4 Additional subject areas over PDRA/STS course may be required for example radio licence.

14. Geographic Zone (Airspace) Restrictions.

Controlled Airspace (Air Risk) Geographic Zones

International and regional airports are protected by Air Traffic Control (ATC) controlled airspace. In Ireland, this airspace extends from the earth's surface to 5000ftamsl and with radius of 18.5km from regional airports and up to 27.8km from Dublin, Cork & Shannon airports.

To reduce *'air risk'* (collisions with manned aircraft), the IAA has imposed limitations on access to controlled airspace *'geographic zones'*.

Open operators have limited access to ATC controlled airspace. Open category operations are prohibited in certain sectors of controlled airspace and height restricted in others.

Specific category operators may operate in all ATC controlled airspace with permission from the relevant ATC unit.

Non-Controlled Airspace (Non-Air Risk) Geographic Zones

Other *'geographic zone'* restrictions may apply for non *'air risk'* reasons. *'Geographic zones'* may prohibit or restrict access to areas for safety, security, privacy and environmental reasons. In Ireland prisons and military facilities often have *'geographic zones'* around them and are good examples of non-air risk *'geographic zones'*.

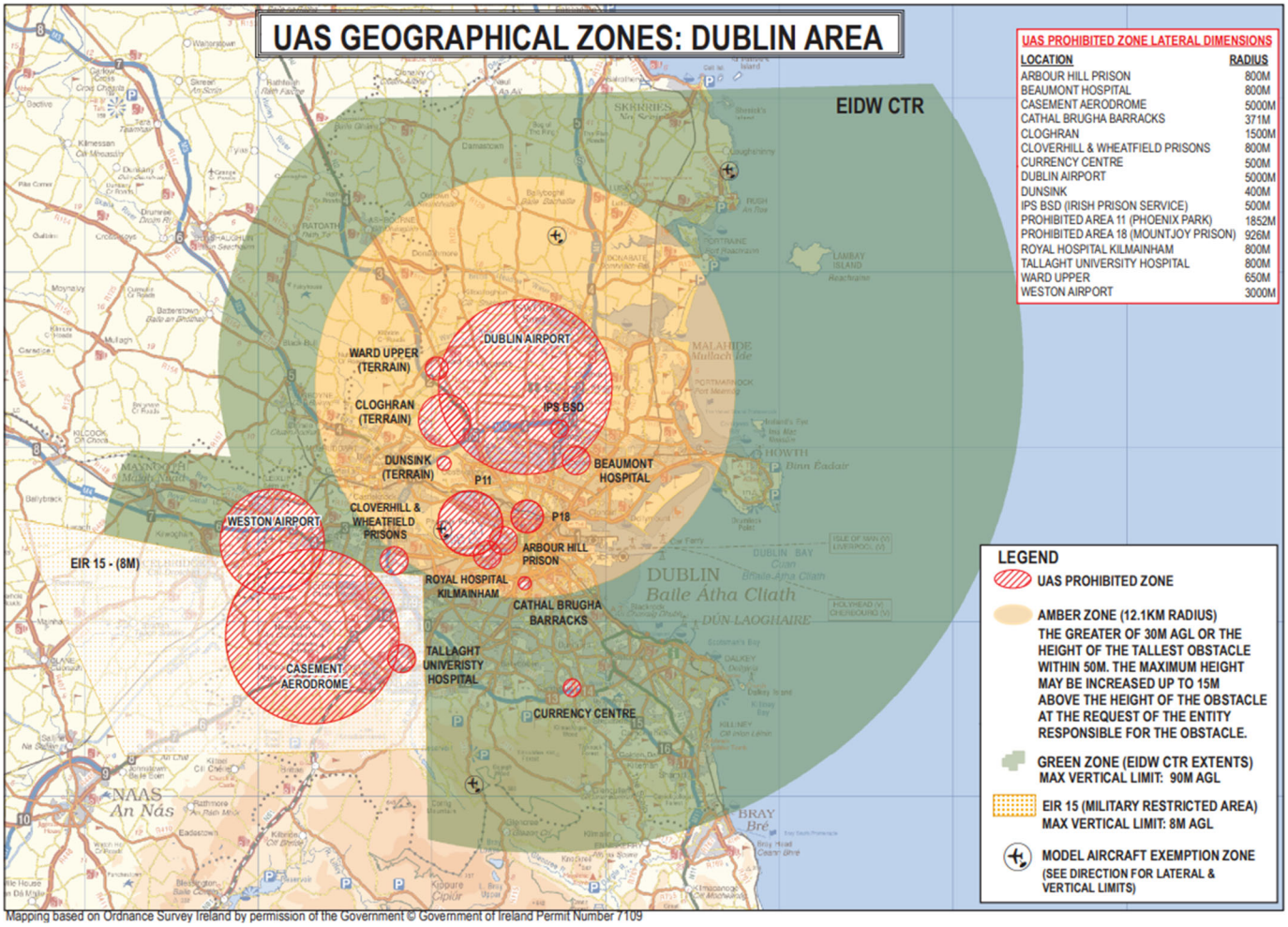
Depending on the 'risk' profile of the geographic zone, Open and Specific category operations may be permitted inside the *'geographic zone'* with the approval of the controlling authority (e.g., Irish Prison Service).

Aeronautical Notice

The IAA have outlined their current (Dec 2021) *'geographic zone'* restrictions in Aeronautical Notice U4.

The document is technical in nature and can be difficult to read. The IAA intend to digitize this data and develop online dynamic charts. Some entities have already digitized the data which is useful for awareness.

- Link to Aeronautical Notice U4
- Link to online airspace chart



Extract from the IAA's Aeronautical Notice U4 regarding the Dublin area. These areas around airports are examples of 'air-risk' 'geographic zones'. Red areas are prohibited for Open category operations. Amber areas limit Open category operations to 30m agl, or 15m above the highest obstacle in the zone if the unmanned aircraft remains within 50 horizontally of the obstacle, whichever is the higher. Green areas limit Open category operations to 90m AGL. Where an area is a prohibited or restricted 'air-risk' 'geographic zone', Specific category operators may operate inside these zones when Air Traffic Control (ATC) permission has also been approved.

15. Insurance.

Regulation (EU) 2019/947 requires UAS Operators comply with applicable European Union or national rules relating to aircraft insurance. Ireland has no specific law relating to aircraft insurance. Thus, UAS Operators in Ireland should comply with the applicable European Union insurance requirements.

Regulation (EC) 785/2004 on insurance requirements for air carriers and aircraft operators, requires aircraft operators, including unmanned aircraft operators, have a minimum of 3rd party liability insurance.

The regulation permits one exemption, that of the operation of *'model aircraft'* with maximum weights below 20kg. Model aircraft is interpreted by aviation authorities as unmanned aircraft used for sport or recreational purposes.

Therefore, Local Authority UAS operations that fall outside the meaning of sport or recreational are required by EU law to have aircraft insurance.

Regulation (EC) 785/2004 requires aircraft operations that include passengers, baggage, cargo, and 3rd parties are covered. Local Authorities at a minimum require insurance where there is an exposure to 3rd parties.

The insurance regulation sets a minimum value for insurance based on the unmanned aircraft's maximum take-off weight. This minimum value is approximately €1m for the lowest weight covered (500kgs).

By establishing a minimum insurance requirement, the regulation ensures 3rd party accident victims have access to appropriate compensation where they have been injured or suffered a loss as a direct consequence of an UAS operation.

The IAA have recently produced guidance on insurance requirements for all UAS operators.

- Link to Guidance on Insurance Requirements for UAS Operations

16. UAS Operator Responsibility- *'Accountable Manager'.*

The *'Accountable Manager'* is that individual designated as the person responsible to the aviation authority in respect of the functions which are subject to regulation and carried out by the UAS Operator.

The individual is expected to have enough authority to influence and ensure an UAS Operator's activities are carried out to the standard required by the aviation authority.

For large complex organisations such as Local Authorities, the CEO should be nominated as the *'Accountable Manager'*. An alternative may be appointed by a director of the company, by letter, on headed paper

Regulatory responsibilities the *'Accountable Manager'* must oversee include:

- Establishing operational procedures.
- Designating appropriately competent remote pilots and other flight crews.
- Ensuring operations are carried out within the limitations of regulations and aviation authority authorisation.
- Ensuring records are maintained for audit purposes.
- Ensuring UAS are maintained in accordance with maintenance requirements.

17. Remote Pilot Responsibility.

'Remote Pilot' means a *'natural person'* responsible for safely conducting the flight of an unmanned aircraft by operating its flight controls, either manually or, when the unmanned aircraft flies automatically, by monitoring its course and remaining able to intervene and change its course at any time.

Regulatory responsibilities the Remote Pilot must oversee include:

- Being fully responsible for the safety and legality of a flight. They have independent responsibility to cancel a flight if they feel the safety and legality is compromised in any way.
- Not fly under the influence of alcohol, psychoactive substances or when ill, injured or impaired in any way.
- Ensure they fly within regulatory limits and in conjunction with operational procedures outlined by the UAS Operator.

- Ensure they only fly in airspace and *'geographic zones'* they are permitted and/or *'authorised'* to fly in.
- Avoid collision risk with manned aircraft and discontinue a flight when continuing it may pose a risk to other aircraft, people, animals, the environment, or property.
- Report in a timely manner any accidents or incidents resulting from the unmanned aircraft activity.

18. Frequently asked Questions.

18.1. How do I fly in Controlled Airspace?

Controlled airspace has a higher *'air-risk'* rating (increased collision risk with manned aircraft).

Consequently, as Open category operations are low risk operations, access to controlled airspace *'geographic zones'* is limited. Some controlled airspace *'geographic zones'* are prohibited for Open category operations while other controlled airspace *'geographic zones'* restrict the height of Open category operations. For example, Dublin's controlled airspace *'geographic zones'* includes height restrictions of 30m agl and 90m agl.

To conduct operations within prohibited controlled airspace *'geographic zones'* or fly higher than the height restricted controlled airspace *'geographic zones'*, a UAS Operator will need.

- A Specific category *'authorisation'*,
- Remote pilot with a valid Specific category certificate.
- An Air Traffic Control Permission (ATC).

18.2. Can I fly in Prohibited & Restricted Geographic Zones that are not controlled airspace?

Some prohibited and restricted *'geographic zones'* are established for non *'air risk' safety,* security, privacy, and environmental reasons. Consequently, it may be possible for both Open and Specific category operators to apply for permission to operate in these prohibited or restricted *'geographic zones'* that are not related to controlled airspace. These applications may be made to the *'geographic zones'* controlling authority, for example, the Irish Prison Service (IPS) or the Irish military.

The Irish Aviation Authority (IAA) have indicated they are currently (Dec 2021) producing a guidance document on how to apply for access to *'geographic zones'* that are not controlled airspace ('*non-air risk'*) related.

18.3. How do I fly close to uninvolved persons?

Flying unmanned aircraft close to uninvolved persons increases the *'ground risk'* of a UAS operation (risk of collision with *'uninvolved persons'*), and therefore the UAS regulation includes operational restrictions on flying close *'uninvolved persons'*.

Open A1 permits operations with no minimum horizontal distance from *'uninvolved persons'*.

Open A2 permits operations with a 50m horizontal distance from *'uninvolved persons'* when using '*legacy*' unmanned aircraft. These operations will not be possible once the Article 22 *'transition period'* ends.

Open A2 permits operations with a 30m horizontal distance from *'uninvolved persons'* when using a *'C2 Marked'* unmanned aircraft. Additionally, this aircraft may be flown as close as 5m horizontally from uninvolved persons when certain conditions are met including use of the *'C2 Marked'* unmanned aircraft's low speed mode function.

Specific category Pre-Defined Risk Assessments (*'PDRA'*S01) and *'Standard Scenario'* (STS01) (when available in Dec 2023) permit operations within a Controlled Ground Area (CGA) utilising unmanned aircraft with max weights up to 25kg. The CGA may be in urban areas. These STS/*'PDRA'* operations permit larger unmanned aircraft to operate in ground areas an Open A3 operation is not permitted.

Controlled Ground Area

From Regulation (EU) 2019/947

'controlled ground area' means the ground area where the UAS is operated and within which the UAS operator can ensure that only involved persons are present.

Specific category operations where the UAS Operator has conducted their own Specific Operations Risk Assessment (*'SORA'*) may be able to fly close to and over uninvolved persons where the risk can be mitigated to a safe level.

18.4. What is the difference between a '*legacy*' unmanned aircraft and a *'C Marked' unmanned* aircraft?

'C Marked' unmanned aircraft are those aircraft designed and manufactured to meet the technical standards outlined in Regulation (EU) 2019/945. They have the distinctive *'C Label'* to indicate they meet the standard.

'*Legacy*' unmanned aircraft do not meet the technical standards of Regulations (EU) 2019/945 and so do not have the *'C Markings'* affixed to them.

In the Open category, '*legacy*' unmanned aircraft may, depending on their max weight, operate in Open A1, A2 & A3 during a *'Transition Period'* ending on 01 Jan 2023.

After 01 Jan 2023, '*legacy*' unmanned aircraft placed on the market before 01 Jan 2023, may operate in Open A3 only unless they have a max weight of less than 250g where they may operate in Open A1.

After 01 Jan 2023, '*legacy*' unmanned aircraft placed on the market after 01 Jan 2023, may not operate in the Open category.

Where a UAS Operator wishes to operate a '*legacy*' unmanned aircraft without restriction, they may be able to operate the aircraft within the Specific category subject to the requirements of a risk assessment.

18.5. Can *'legacy'* aircraft be retrospectively converted to *'C Marked'* aircraft?

Technically it may be possible if a *'legacy'* aircraft could meet all the technical requirements required by the regulation. It would require the unmanned aircraft being sent back to the manufacture, or their authorised agent, for upgrading and affixing of the 'C Marking'. Even if this was practical, it may still not be economical to do so. It would also require European regulatory approval.

18.6. Will the Article 22 'Transition Period' be extended?

The Article 22 *'Transition Period'* permits *'legacy'* unmanned aircraft to operate in the Open category with less restriction than Article 20 requires. Article 22 *'Transition Period'* is set to end on 01 Jan 2023 when it was expected 'C Marked' aircraft would be available. As there is a delay to 'C Marked' aircraft being made available on the market, it is possible the European Commission (EC) may make an amendment to Article 20 and 22 and extend the date. There is no indication (Dec 2021) this will happen

18.7. Where do I register a UAS Operation?

A UAS Operator must register their UAS Operation with a competent authority. In Ireland this competent authority is the Irish Aviation Authority (IAA).

The IAA have developed an online portal (MYSRS) where UAS Operators can register their operation. Potential UAS Operators must initially open an account with MYSRS and within this account a UAS Operator can register their operation.

Local Authorities do not have a Company Registration Office (CRO) number and therefore a Local Authority should contact the IAA directly when they wish to complete the registration process. The IAA will complete a manual registration of the Local Authority within MYSRS.

The IAA have outlined this process in UAM 003.

- UAM 003 - Guidance on UAS Operator Registration for Complex Organisations.

18.8. Do individual unmanned aircraft need to be registered?

No. Regulation (EU) 2019/947 requires the UAS Operator is registered and not the unmanned aircraft.

A UAS Operator is either a *'natural person'* or *'legal person'*. Local Authorities are *'legal person'* UAS Operators.

Each unmanned aircraft used by a UAS Operator must have the UAS Operator's registration number affixed to the frame of the aircraft.

18.9. Do remote pilots need training?

Remote pilots are required to meet the competency requirements of the category of operation they are operate in.

Open A1/A3 is the minimum training requirement. All remote pilots operating aircraft of 250g or greater are required to complete this training. This training is completed on the IAA's MYSRS online portal. The training requirement is to complete the online theory course and answer 40 multiple choice questions.

Open A2 is an upgrade to the Open A1/A3 certification and remote pilots holding this accreditation may conduct Open A2 operations. Open A2 training is completed at a commercial UAS school (DUTO). The training requirement is to complete a theory exam. Additionally, the remote pilot must complete some self-practical training.

Specific category remote pilot training is outlined in a risk assessment. Specific category remote pilot training is conducted by a commercial school (DUTO) and involves both theory training, theory exam and practical skill training. The minimum Specific category training complies with the requirement of PDRA S01/S02.

18.10. Where are remote pilot certificates issued from?

UAS regulation requires remote pilot certificates are issued by a *'designated entity'*. In Ireland, the *'designated entity'* is the Irish Aviation Authority (IAA). The IAA issue remote pilot certificates through their MYSRS online portal.

Each individual remote pilot is required to open a MYSRS account. Within this account the Open A1/A3 theory course and exam is completed.

Open A2 and Specific category remote pilot courses are conducted at Declared UAS Training Organisations (DUTO). A remote pilot successfully completing a theory course and exam with a DUTO will be recommended by the DUTO to the IAA for the award of the certificate. A record is entered on MYSRS by the DUTO, and the IAA issue the certificate through MYSRS.

18.11. We previously held an Irish SOP. What do we do now?

Previous Irish Specific Operations Permit (SOP) holders need to examine their operation and decide if their operations fall under the Open or Specific category.

If Open category operations are required, the process is straight forward.

- Local Authority registration.
- Remote pilots complete Open A1/A3 and where required Open A2 category training.
- Remote pilots attain their theory certificates (IAA MYSRS).

If Specific category operations are required, the process includes.

- Local Authority registration.
- Remote pilots complete Specific category training.
- Remote pilots acquire their theory certificate (IAA MYSRS) and practical certificate (DUTO).
- Risk assessment type determined (Pre-Defined process or UAS Operator defined).
- Operations Manual compiled.
- Application for 'authorisation' submitted to aviation authority.
- 'Authorisation' acquired.

18.12. We previously held an Irish PCC. What do we do now?

Previous Irish Pilot Competency Certificate (PCC) holders need to examine their operation and decide if their operations fall under the Open or Specific category.

If Open category operations are required, the process is straight forward.

- Remote pilots complete Open A1/A3, and where required Open A2, category training.
- Remote pilots attain their theory certificates (IAA MYSRS).

If Specific category operations are required, the process includes.

- Remote pilots complete Specific category training.
- Remote pilots acquire their theory certificate (MYSRS) and practical certificate (DUTO).

19. Path to Operations.

Open Category

Open Category Operations			✓
Step 1	Define Organisation	• *'Accountable Manager'* - *'Parent Entity'* responsibility. Local Authority level. • *'UAS Responsible Person'* - *'Sub-Entity'* responsibility. Departmental level. • Follow IAA guidance. (UAS Advisory Memorandum (UAM) 03)	
Step 2	Registration (1)	• Local Authority registers as a 'legal person' UAS Operator. • *'Accountable Manager'* applies to IAA for manual registration.	
Step 3	*'Accountable Manager'*	• Local Authority level. • Designated individual opens account with IAA's MYSRS system. (https://iaa.mysrs.ie).	
Step 4	*'Responsible Person'*	• Department / Sub Section level. • Designated individual opens account with IAA's MYSRS system. (https://iaa.mysrs.ie).	
Step 5	Remote Pilots	• Designated individuals open account with IAA's MYSRS system. (https://iaa.mysrs.ie).	
Step 6	Remote Pilot Open A1/A3 Training	• Complete Open A1/A3 foundation training course within MYSRS account. • Download "Proof of Completion of the Online Training" certificate within MYSRS.	
Step 7	Remote Pilot Open A2 Training	• Required for Open A2 operations. • Complete Open A2 theory course & exam with a DUTO (IAA recognised UAS training school). • Complete Self-Practical Training (DUTO provides guidance). • Download Open A2 "Remote Pilot Certificate of Competency" certificate within MYSRS after sign-off by DUTO.	
Step 8	Registration (2)	• *'Accountable Manager'* role assigned within MYSRS. • *'UAS Responsible Person'* role assigned within MYSRS. • Affix registration numbers to all unmanned aircraft. *Note: 'Parent Entity' and Sub-Entities may have different registration numbers.* • Upload registration details to the unmanned aircrafts electronic identification system (if available).	
Step 9	Commence Operations	• *'Accountable Manager'* - Responsible for managing operational & regulatory matters common to all departments. • *'UAS Responsible Person'* - Responsible for managing operational & regulatory unique to the department. • Remote Pilot - Responsible for safe and legal operations while the unmanned aircraft is airborne.	

Specific Category

Specific Category Operations			✓
Step 1	Define Organisation	• *'Accountable Manager'* - *'Parent Entity'* responsibility. Local Authority level. • *'UAS Responsible Person'* - *'Sub-Entity'* responsibility. Departmental level. • Follow IAA guidance. (UAS Advisory Memorandum (UAM) 03)	
Step 2	Registration (1)	• Local Authority registers as a 'legal person' UAS Operator. • *'Accountable Manager'* applies to IAA for manual registration.	
Step 3	*'Accountable Manager'*	• Local Authority level. • Designated individual opens account with IAA's MYSRS system. (https://iaa.mysrs.ie).	
Step 4	*'Responsible Person'*	• Department / Sub Section level. • Designated individual opens account with IAA's MYSRS system. (https://iaa.mysrs.ie).	
Step 5	Remote Pilots	• Designated individuals open account with IAA's MYSRS system. (https://iaa.mysrs.ie).	
Step 6	Remote Pilot Open A1/A3 Training	• Complete Open A1/A3 foundation training course within MYSRS account. • Download "Proof of Completion of the Online Training" certificate within MYSRS.	
Step 7	Remote Pilot Specific Category Training	• Required for Specific category operations as per risk assessment. • Complete Specific category theory course & exam with a DUTO (IAA recognised UAS training school). • Download Specific category "Remote Pilot Certificate of Theoretical Knowledge" certificate (STS/*'PDRA'* course) within MYSRS after sign-off by DUTO. • Complete practical training & assessment with a DUTO and receive certificate of completing practical skill training from DUTO.	
Step 8	Registration (2)	• *'Accountable Manager'* role assigned within MYSRS. • *'UAS Responsible Person'* role assigned within MYSRS. • Affix registration numbers to all unmanned aircraft. *Note: 'Parent Entity' and Sub-Entities may have different registration numbers.* • Upload registration details to the unmanned aircrafts electronic identification system (if available).	
Step 9	Authorisation	• Apply for Specific category *'authorisation'* from Irish Aviation Authority. • Application made through MYSRS. • Parent-Entity or individual Sub-Entities may apply. • Application based on risk assessment (Authority provided Predefined Risk Assessment (*'PDRA'*) or self-defined RA (*'SORA'*). • Submit Operations Manual & supporting documentation.	
Step 10	Commence Operations	• *'Accountable Manager'* - Responsible for managing operational & regulatory matters common to all departments. • *'UAS Responsible Person'* - Responsible for managing operational & regulatory unique to the department. • Remote Pilot - Responsible for safe and legal operations while the unmanned aircraft is airborne.	

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An Ghníomhaireacht Bainistíochta Rialtais Áitiúil
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