An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Proposed licensing of C-UAS

Response to Consultation and Decision including Draft Regulations

Response to Consultation and Decision

Reference: ComReg 24/77

Decision No: D22/24

Version: Final

Date: 24/09/2024

An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation
1 Lárcheantar na nDugaí, Sráid na nGildeanna, BÁC 1, Éire, D01 E4X0.
One Dockland Central, Guild Street, Dublin 1, Ireland, D01 E4X0.
Teil | Tel +353 1 804 9600 Suíomh | Web www.comreg.ie

Legal Disclaimer

This Response to Consultation is not a binding legal document and also does not contain legal, commercial, financial, technical or other advice. The Commission for Communications Regulation is not bound by it, nor does it necessarily set out the Commission's final or definitive position on particular matters. To the extent that there might be any inconsistency between the contents of this document and the due exercise by it of its functions and powers, and the carrying out by it of its duties and the achievement of relevant objectives under law, such contents are without prejudice to the legal position of the Commission for Communications Regulation. Inappropriate reliance ought not therefore to be placed on the contents of this document.

Content

Annex

Section Page

Chapter 1

1 Introduction

1.1 In July 2024, the Commission for Communications Regulation ("ComReg") published its consultation and draft decision, including draft regulations, regarding the proposed licensing of counter-unmanned aircraft system ("C-UAS") (Document 24/42)[1]. This included:

- background information on C-UAS and drones, including information on recent regulatory changes put in place to enable the licensing of the C-UAS device (the "Device");
- ComReg's high level assessment of the Device proposed for use by Dublin Airport Authority ("DAA") to counteract malicious UAS (or "drone") use at Dublin Airport;
- ComReg's licensing proposals and draft Regulatory Impact Assessment for same; and
- the draft decision and draft regulations for same.

1.2 ComReg did not receive any submissions in response to Document 24/42 and, consequently, will now implement the licensing framework as set out therein.

1.3 ComReg does not repeat the above background information or its high level assessment of the Device in this document but instead refers interested parties to Document 24/42.

1.2 Structure of document

1.4 This document is structured as follows:

- **Chapter 2:** sets out ComReg's final position in respect of the proposed licensing framework;
- **Chapter 3:** sets out ComReg's final Regulatory Impact Assessment;
- **Chapter 4:** sets out ComReg's decision regarding its licensing proposals; and
- **Annex 1**: sets out the draft regulations.

[1] Proposed Licensing of C-UAS | Commission for Communications Regulation (comreg.ie)

Chapter 2

2 Proposed Licensing Framework

2.1 Chapter 3 of Document 24/42 set out ComReg's licensing proposals for the proposed use of the Device at Dublin Airport by DAA.

2.2 In forming its proposals, ComReg had regard to, among other things:

- information provided by DAA and its consultants;
- expert advice received from ComReg's technical expert, Plum Consulting LLP ("Plum"); and
- the results of spectrum monitoring conducted by ComReg staff at Dublin Airport while the device was being tested prior to its deployment under a Test and Trial licence.

2.3 ComReg's proposed licensing framework is outlined below. Readers are, however, referred to Chapter 3 of Document 24/42 for detailed reasoning for same.

2.2 Apparatus Licence

2.4 Given the mode of operation of the Device, ComReg was of the preliminary view that it would licence only the specific Device that would be deployed by DAA at Dublin Airport.

2.3 Geographic scope of use

2.5 Consistent with the legislative changes made to enable the operation of the Device by DAA (e.g. to the Wireless Telegraphy Act 1926[2] and the Electromagnetic Compatibility Regulations 2017[3]), the geographic scope of any licence granted to DAA in respect of the Device would be exclusively for its use at Dublin Airport only.

2.4 Operational Conditions

2.6 In Document 24/42, ComReg proposed to attach the following operational conditions:

(i) DAA would comply with any obligation imposed on it by IAA or AirNavIreland to protect radiocommunication services operating in the airfield;

[2] pdf (irishstatutebook.ie)
[3] pdf (irishstatutebook.ie)

(ii) all instances of use of the Device must, without exception, be reported by DAA to ComReg within 24 hours. This would enable ComReg to consider its impact upon wireless services in and around Dublin Airport, including appropriately responding to any potential reports of harmful interference to radiocommunications services operating in and around Dublin Airport in a timely manner;

(iii) DAA would be obliged to facilitate, in a timely manner, any inspection and/or testing of the Device by ComReg, including its servants and agents; and

(iv) DAA would be required to provide an annual report to ComReg, on the anniversary of the grant of any licence, which would, at a minimum, include the following:

a. Details of the times and dates when the Device was activated in the previous 12 month period;

b. Identified and/or reported impact, if any, on radiocommunications operating in the aerodrome arising from each such activation;

c. Proof of the annual calibration of the Device to ensure that it still operates in accordance with the proposed licence conditions;

d. The standard operating procedure for the authorisation and use of the Device;

e. A complete list of all personnel authorised to use the Device; and

f. Appropriate evidence of training of all personnel authorised to use the Device.

2.5 Technical Conditions

2.7 Table 1 below outlines out the proposed technical conditions.

[redacted]

Parameter	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Table 1: Proposed Technical Licence Conditions

2.6 Licence Duration

2.8 ComReg was of the preliminary view that a three-year overall licence period, with provision to renew annually, would be appropriate in the present circumstances.

2.7 Licence Fees

2.9 ComReg proposed that the licence fees would comprise the following:

(i) a once-off, upfront fee of **€25,000** which would be paid prior to the initial grant of the licence; and

(ii) an annual, index-linked[4] fee that is paid at the beginning of each year over the duration of the Licence. The annual fee in the first year of the licence would be **€9,500**.

2.8 ComReg's final position on its licensing proposals

2.10 Given that no responses were received to ComReg's proposals set out in Document 24/42, ComReg will proceed to implement the licensing framework as set out therein.

[4] Annual fees are index-linked to the overall Consumer Price Index ("CPI") as published by the Central Statistics Office of Ireland (or its successor).

Chapter 3

3 Final Regulatory Impact Assessment

3.1 Introduction

3.1 This chapter sets out ComReg's final Regulatory Impact Assessment ("RIA") on whether to grant DAA a licence for the Device.

3.2 The RIA assesses a number of regulatory options before providing ComReg's preferred option, having regard to the impact on stakeholders, competition, and consumers. It concludes with an assessment of the Preferred Option against ComReg's statutory remit, including relevant functions, objectives, and duties as outlined earlier.

3.3 ComReg conducted this RIA having particular regard to the expert technical advice provided by Plum which, among other things, was commissioned to provide a thorough engineering assessment of the potential for the Device equipment to cause interference to incumbent services within the boundary of Dublin Airport and [✂ [redacted] ✂]

3.2 RIA Framework

3.4 A RIA is an analysis of the likely effect of proposed new regulation or regulatory change and, indeed, of whether regulation is necessary at all. The RIA should help identify regulatory options and establish whether the proposed regulation is likely to have the desired impact, having considered relevant alternatives and the impacts on stakeholders. The RIA is a structured approach to the development of policy and analyses the impact of regulatory options. In conducting a RIA, the aim is to ensure that all proposed measures are appropriate, effective, proportionate and justified.

3.5 A RIA should help identify the most effective and least burdensome regulatory option and seek to establish whether a proposed regulation or regulatory change is likely to achieve the desired objectives, having considered relevant alternatives and the impacts on stakeholders. In conducting a RIA, the aim is to ensure that all proposed measures are appropriate, effective, proportionate and justified.

3.2.2 Structure of the RIA

3.6 As set out in ComReg's RIA Guidelines[5], there are five steps in a RIA. These are:

[5] See Document 07/56a – Guidelines on ComReg's approach to Regulatory Impact Assessment – August 2007.

a) Step 1: describe the policy issue and identify the objectives;

b) Step 2: identify and describe the regulatory options;

c) Step 3: determine the likely impacts on stakeholders;

d) Step 4: determine the likely impacts on competition; and

e) Step 5: assess the likely impacts and choose the best option.

3.7 In the following sections, ComReg identifies the specific policy issues to be addressed and relevant objectives. (i.e., Step 1 of the RIA process). ComReg first makes some relevant observations below on the stakeholders involved and on ComReg's approach to Steps 3 and 4.

3.2.3 Identification of stakeholders and approach to Steps 3 and 4

3.8 Step 3 assesses the likely impact of the proposed regulatory measures on stakeholders. In this RIA, stakeholders fall into six main groups:

I. Consumers including those who use wireless communication services (e.g., mobile, fixed wireless etc) and airport services provided at Dublin Airport.

II. DAA whose principal activities include the operation and management of Dublin Airport.

III. AirNav Ireland and the Irish Aviation Authority. AirNav Ireland is a commercial semi-state company which provides air traffic management and related services (i.e., air traffic controllers)[6]. The IAA is a commercial semi-state company and the single civil aviation regulator for Ireland.

IV. MET Éireann who operates a weather radar facility in Dublin Airport.

V. Operators including Mobile Network Operators ('MNO's), Fixed Wireless Access ('FWA') Operators and other potentially impacted operators.

VI. Airlines which provide air traffic services to consumers and businesses.

3.9 Step 4 assesses the impact on competition of the various regulatory options available to ComReg. In that regard, ComReg notes that it has various statutory functions, objectives and duties which are relevant to the issue of competition.

3.10 Of themselves, the RIA Guidelines and the RIA Ministerial Policy Direction provide little guidance on how much weight should be given to the positions and views of

[6] Air Traffic Controllers are responsible for the safe, orderly and expeditious movement of air traffic on and in the vicinity of airports and in the airspace for which Ireland is responsible.

each stakeholder group (Step 3), or the impact on competition (Step 4). Accordingly, ComReg has been guided by its statutory objectives and section 12 of the 2002 Act in particular regarding ensuring the efficient management and use of the radio frequency spectrum in Ireland[7].

3.11 In this document, ComReg has adopted the following structure in relation to Step 3 and Step 4 – the impact on industry stakeholders is considered first, followed by the impact on competition, followed by the impact on consumers. This order does not reflect any assessment of the relative importance of these issues but rather reflects a logical progression: a measure which safeguards and promotes competition should, in general, impact positively on consumers. In that regard, the assessment of the impact on consumers draws substantially upon the assessment carried out in respect of the impact on competition.

3.3 Step 1: Identify the policy issues & the objectives.

Policy Issues

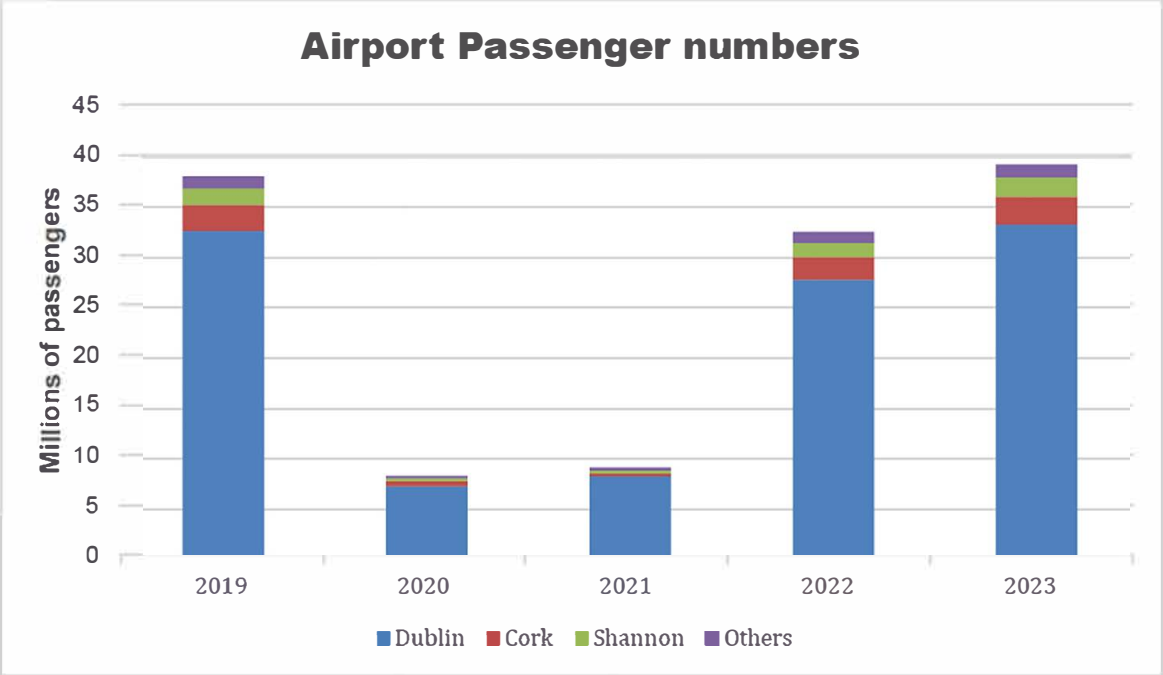
3.12 Air travel is of particular importance to Ireland as an island on the periphery of Europe. Air travel plays a pivotal role in facilitating international travel and economic activity in Ireland. Dublin Airport is the most important of Ireland's airports, given its scale and location near Dublin, Ireland's largest population centre, and at the heart of Ireland's motorway network. In 2023, Dublin Airport handled 85% of Irish air passengers, with approximately 33.3 million of the 39.2 million air passengers to Ireland passing through Dublin Airport[8] (See Figure 1).

3.13 Dublin Airport is often the primary gateway for international visitors to Ireland, thereby significantly contributing to the nation's vibrant tourism sector. Tourists arriving and departing from Dublin Airport contribute substantially to the local economy, supporting businesses like hotels, restaurants, and attractions, and enhancing cultural exchange.

3.14 A recent study undertaken by the economic consultants InterVistas, found that Dublin Airport contributes a total of €9.6 billion in gross value added ("GVA") to the Irish economy and supports or facilitates 116,100 jobs in the Republic of Ireland.[9] Serving as a crucial connectivity hub, it not only enables the efficient transit of passengers but also serves as a vital conduit for freight and cargo, linking Irish goods and services to global markets. In 2023, Dublin Airport handled over 90% of air freight passing through Irish airports[10].

[7] Section 12(1)(b) of the 2002 Act
[8] Aviation Statistics Quarter 4 and Year 2023 - Central Statistics Office
[9] See https://www.dublinairport.com/corporate/dublin-airport-vision/economic-impact-studies
[10] Aviation Statistics Quarter 4 and Year 2023 - Central Statistics Office

Figure 1: Total passenger numbers handled by all airports, 2018 - 2022



Source: ComReg analysis of CSO data

Recent drone incidents

3.15 The number of security incidents involving drones near airports and beyond has dramatically increased worldwide in line with the growing use of drones across society.[11] For example:

- For the first time, the 2024 edition of the Annual Safety Review (ASR) covers the new domain of unmanned aircraft systems (UAS) and their operations. There were two serious events between UAS and manned aircraft. The manned aircraft involved in these occurrences were large aircraft (Bombardier BD500 and Airbus A320) that encountered UAS during approach and departure from a Member State aerodrome. [12]
- In the first 6 months of 2024, the AirProx Board[13] published details of 32 potential drone sightings from pilots so far in 2024. For seven of these, the board note that there was a definite risk of collision.[14]
- The Federal Aviation Authority ("FAA") in the United States which publishes sightings reports of unmanned aircraft from pilots, citizens and law

[11] DroneSec, a drone security company that tracks drone incidents reports a 30% increase in the number of reported incidents in 2022
DroneSec Notify 2022 Summary & Public Newsletter #160 - DroneSec
[12] Highlights of the Annual Safety Review 2024 | EASA (europa.eu)
[13] The UKAB is the UK's focal point for investigating and reporting the circumstances, causes and risk of collision for all Air proximity occurrences in UK airspace.
[14] https://www.airproxboard.org.uk/reports-and-analysis/monthly-airprox-reviews/airprox-reports-2024/june/

enforcement illustrates a consistent trend of regular drone sightings. [15]

- In Frankfurt Airport, one of Europe's busiest, air traffic was restricted for a total of 10 days by drone related incidents - more than in any other year since the airport first recorded drone activity in 2017[16]. Air traffic had to be completely halted on two days in 2023 due to drone incursions around the airport. The incidents which restricted or shut down airport operations occurred on 6 July, for 85 minutes, and 28 September, for 55 minutes.[17]

3.16 In Ireland, drone incidents have occurred intermittently in the past, most notably in 2019 when drone use over Dublin Airport resulted in flight operations being temporarily suspended, with two flights being diverted to Belfast and Shannon airports after a pilot had reported a definite sighting of a drone while taxiing to a runway.[18]

3.17 However, more recently the number of incidents has increased significantly, in line with increase drone use across the country. Since 2021, over 17,500 drone pilots have been trained by the IAA and in 2023 there was a 25% increase in the number of pilots trained[19]. This, combined with the increase in unregistered and recreational drone use, has seen a marked increase in the number of drone related incidents at Dublin Airport (see Table 2 below).

Table 2: List of recent incidents at Dublin Airport

Year	Date	Incident Description
2022	27 March	Airport operations were suspended for around 20 minutes due to a UAS being flown near the airport.[20]
2023	24 January	Flight operations were disrupted for half an hour, leading to two flights being diverted to other airports[21].
	3rd February	Four flights were diverted as a result of a drone being reported near the airport[22].
	4th February	Flights were disrupted for about 45 minutes from 2:10 pm after two confirmed drone sightings[23].
	6th February	A 40-minute interruption was caused when a drone was sighted around 7 pm, causing disruption to flights until 7:45 pm[24].

[15] UAS Sightings Report | Federal Aviation Administration (faa.gov)

[16] Between December 2017 and November 2023, Fraport noted 26 dates on which drone incursions had an impact on flight operations, including on six days on which traffic had to be halted completely for between 25min to over 1h.

[17] Drone incursions stopped Frankfurt airport traffic twice in 2023 | News | Flight Global

[18] Drone sighting causes flights to be suspended at Dublin Airport (irishexaminer.com)

[19] Drone-owners must register with the Irish Aviation Authority to fly drones that weigh 250 grams or more.

[20] 27 March 2022 "All flight operations at Dublin Airport stop for 20 minutes because of drone". TheJournal.ie.

[21] 10 February 2023. "Man charged after drone activity at Dublin Airport". RTÉ News.

[22] 3 February 2023. "Flights briefly diverted from Dublin Airport due to drone activity". *TheJournal.ie*..

[23] 4 February 2023. "Drone activity impacts flights for a second day at Dublin Airport". *Irish Examiner*..

[24] 7 February 2023. "Ministers meet aviation officials and gardaí over repeated drone disruption at Dublin Airport". *TheJournal.ie*. Retrieved 22 February 2023.

	21st February	Airport operations were suspended for around 30 minutes, until 8:50 pm, due to a UAS being flown near the airport.[25]
	2nd March	Airport operations were once again suspended for around 30 minutes, due to a drone being flown near the airport.[26]
	4th August	Two airborne passenger jets had to be diverted to Belfast Airport after a drone was spotted near Dublin Airport. In addition, all flights due to take off were held for around 10 minutes until the all-clear was given.[27]
2024	23rd March	Investigation under way after drone seized near Dublin Airport[28]

3.18 In response to the spate of drone incidents, the Government decided to appoint DAA to purchase and deploy a counter-drone technology solution at Dublin Airport[29]. There are several counter drone measures that can be adopted by airport authorities in order to counter the threat presented by the unauthorised use of drones. One of the counter drone solutions preferred by DAA at Dublin Airport is a C-UAS device.

3.19 Broadly speaking, the Device works by jamming signals between the drone and its operator, which could potentially interfere with nearby communication services which operate in the same spectrum, such as Wi-Fi networks, mobile signals, and radio frequencies. Anti-drone technology can therefore potentially impact the provision of electronic communication services.

3.20 Until recently, the use of such devices was not permitted.[30] Following necessary legislative changes (as discussed in Chapter 2 of Document 24/42), ComReg granted a Test Licence[31] to DAA for the use of the C-UAS Device. Such a licence is not suitable where the use of the Device is required over an extended period which is the case in this matter.

3.21 Given the above, the main policy issue is to determine what licensing framework (if any) ComReg should put in place for use of the Device at Dublin Airport.

Objectives

3.22 ComReg aims to design and carry out its assessment of what licensing framework (if any) should be put in place for use of the Device at Dublin Airport in accordance with its statutory objectives.

[25] "Dublin Airport: Flights suspended for 30 minutes after drone sightings". BBC News. 21 February 2023.

[26] 2 March 2023. "Michael O'Leary demands urgent action from transport minister after drone disrupts Dublin Airport flights for sixth time".

[27] 4th August 2023, Drone forces two flights to divert away from Dublin Airport (irishexaminer.com)

[28] 23rd March 2024 Investigation under way after drone seized near Dublin Airport – The Irish Times

[29] Airport Policy – Tuesday, 20 Jun 2023 – Parliamentary Questions (33rd Dáil) – Houses of the Oireachtas

[30] See Section 2.4 above.

[31] See https://www.testandtrial.ie/

3.23 A key objective is that any licensing framework for a Device should encourage the efficient use and ensure the effective management of the radio frequency spectrum in Ireland (in accordance with Section 12 of the 2002 Act) and, among other things, ensure that the integrity of the radio spectrum resource is maintained by minimising undue harmful interference. It must also be objectively justified, non-discriminatory, and proportionate.

3.24 In addition, the focus of this RIA is to assess the impact of the proposed measure(s) (see regulatory options below) on stakeholders, competition, and consumers. ComReg can then identify whether a licensing framework is required, and the form any licensing framework should take.

3.25 Having identified the policy issues and objectives, as outlined earlier, ComReg now identifies the regulatory options required to assess those options.

3.4 Step 2: Identify and describe the regulatory options.

3.26 In response to the Government Direction, the counter drone device purchased by DAA at Dublin Airport is the Device [✂ ✂]. This Device operates by [✂ ✂]. With that in mind, Option 1 is the 'do nothing' option and involves ComReg taking no regulatory action and not permitting the use of the Device by DAA.[32]

3.27 To determine other potential options, ComReg considers the impact of the licence conditions recommended by Plum in Appendix A of its report by examining whether to permit the licensing of the device, with and without conditions. ComReg's assessment is set out in Chapter 3 of Document 24/42.

3.28 Therefore, ComReg notes that the following regulatory options are available to it:

- **Option 1** is the 'do nothing' option and involves ComReg not providing a licensing framework for use of the Device by DAA at Dublin Airport.
- **Option 2** is to license the Device to DAA without any technical conditions governing the use of that equipment; and
- **Option 3** is to license the Device to DAA, subject to the conditions outlined in Chapter 2 above.

[32] As noted in ComReg's RIA Guidelines, "*the first option will always be to make no change to the current regulatory policy, and other possible options will then be added. The option of making no policy change will not always be practical but its inclusion serves as a benchmark against which other options can be compared*"

3.5 Steps 3 and 4: Impact on industry stakeholders, competition, and consumers

3.29 The focus of this section of the RIA is to assess the impact of the regulatory options on:

i. stakeholders;

ii. competition; and

iii. consumers.

3.5.2 Impact on stakeholders

3.30 This section provides information on the impacts on stakeholders arising from the regulatory options outlined above. As noted in Section 4.2.3 of Document 24/42, the five main stakeholder groups are (i) operators, (ii) airlines (iii) DAA (iv) AirNav Ireland and (v) MET Éireann. These are assessed in turn below noting that other stakeholders such as the An Garda Síochána will also be considered where appropriate. The 'Impact on consumers' is considered separately in Section 5.5.4 below.

3.31 The safety risks associated with drone use near an airport is the primary concern for multiple stakeholder groups. Therefore, ComReg briefly describes the main safety risks associated with drone use which can be referred to later in this RIA for relevant stakeholder groups as appropriate.

Safety risk associated drone use.

3.32 As noted above ("Recent Drone Events"), close proximity events and collisions between airplanes and drones occur on an annual basis. The potential of drones to become a safety hazard at airports has been known for some time[33],[34],[35]. The major safety risk with drones operating near airports is the potential for collision between aircrafts (taking off and landing) and drones, with the potential for damage, serious injury or death. Tests conducted by the UK government found that a 400g drone could smash a helicopter's windscreen, while a 2kg drone could cause critical

[33] Dublin Airport Launches No Drone Zone Awareness Campaign

[34] PARAS Guidance for Integrating Unmanned Aircraft Systems (UAS) into Airport Security https://www.sskies.org/images/uploads/subpage/PARAS_0012.UASAirportSecurityIntegration.FinalGuidebook.pdf

[35] U.S. Government Accountability Office (GAO 2018) Unmanned Aircraft: https://www.gao.gov/key_issues/unmanned_aerial_systems/issue_summary

damage to a passenger jet's windscreen[36].

3.33 While drone sightings may not always occur in the immediate vicinity of the airport or flight path, so called near miss events do occur, are much more serious and could have potentially devastating consequences. For example:

- research published in March 2023 has closely assessed encounters between drones and airplanes. Over the three-year study period, researchers detected twenty-four close-call events where the mean lateral distance between the drone and the airplane was only about 215 feet. Commercial air carriers were involved in 11 such incidents[37].

- More recently, ENASA has published research on the vulnerability of manned aircraft to drone strikes.[38] Results based on simulations of collisions have shown that all aircraft considered within the research are vulnerable to drone strikes given the likely velocity and weight of available drones. The severity of damage to aircraft increases with collision velocity and weight of the drones.

3.34 This highlights that drones can come within very close proximity to aircraft while in the vicinity of major international airports. This serious risk to safety is not just a theoretical concern - in August 2023 the right wing of an Emirates flight (Airbus A380) was seriously damaged after a suspected mid-air collision with a drone as it was landing at Nice Cote D'Azur Airport in France[39].

3.35 Therefore, the presence of drones presents a clear safety risk to passengers and, while collisions between drones and aircraft are rare, they have occurred and there remains a risk of incidents that could damage property and/or cause injury or death to passengers and persons in and around an airport[40].

Option 1 - No licensing framework

Operators

3.36 Under Option 1, there is no risk of interference with ECS and ECN in the potentially affected areas because the use of a C-UAS device would not be permitted. Operators

[36] UK Dep. For Transport, Small Remotely Piloted Aircraft Systems (drones) Mid-Air Collision Study. Small Remotely Piloted Aircraft Systems (drones) (publishing.service.gov.uk)

[37] 'International Journal of Aerospace,' Three Case Studies on Small Uncrewed Aerial Systems Near Midair Collisions with Aircraft: An Evidence-Based Approach for Using Objective Uncrewed Aerial Systems Detection Technology, Volume 16, Issue 3, 2023.

[38] DS - D8.1-D8.2 - Guidance on the design of drones based on outcomes of drone collision severity studies (europa.eu)

[39] Emirates A380 wing damaged after drone collision in France - The Aviator Middle East (theaviatorme.com)

[40] Around 20,000 people work on the Dublin airport campus. 'There's every job you can think of': Dublin Airport jobs fair hoping to help careers take off – The Irish Times

would therefore likely prefer Option 1 because there would be no harmful interference associated with this Option. That said, operators are also unlikely to be satisfied with a situation where the use of drones could damage property and/or create potentially significant safety concerns for passengers and persons in an around the airport. Operators are also unlikely to favour outcomes which would likely result in airport disruptions persisting. Such situations are more likely to arise under Option 1.

Airlines

3.37 Under Option 1, airlines would likely have significant concerns about the threat of a major safety incident involving a drone (as discussed above). Further, even where a collision did not result in death or injury, damage to the aircraft would occur which would likely be decommissioned for a period to conduct repairs, the cost of which would fall on airlines.

3.38 Separately, the safety risk associated with drones leads to airport closures and flight suspensions which impose costs on airlines. The expected economic impact of disruptions will depend on the frequency and duration of any drone incident. However, the losses arising from such incidents are potentially large and fall mainly on the airlines and include the cost of grounded/diverted aircraft, loss of revenue, increased labour and fuelling costs[41] and consumer expenses and compensation.

3.39 For example, a serious incident happened between 19 - 21 December 2018 in London, when Gatwick Airport suspended its operations due to a drone attack. Police investigators said that it was a planned attack, involving someone with inside knowledge of the airport's operational procedures. It is estimated that 140,000 passengers were affected, with around 1,000 flights either diverted or cancelled. The economic loss from the London Gatwick disruption was estimated at approximately €64 million, with most cost falling on airlines.[42] EasyJet alone announced a loss of €16.7 million in revenue and customer welfare costs[43][44].

3.40 Incidents of a smaller scale can also cause significant cost, particularly if they lead to the closure of the runway. EASA has noted that drone incidents at airports can cause "*severe economic cost to airports and airlines*". "*This represents a real burden for the industry, particularly as the number of incidents has multiplied in the past years*." EASA estimates that the cost of a 30-minute runway closure is ranges from

[41] An extra 30-minute airtime for a single commercial aircraft uses around 1,500 litres of fuel. Standard Inputs for EUROCONTROL Cost-Benefit Analyses - Title (eurocontrol.int)

[42] COMMISSION STAFF WORKING DOCUMENT EU Drone Sector state of play, Brussels, 29.11.2022 COMMISSION STAFF WORKING DOCUMENT (europa.eu)

[43] Journal of Transportation Security (2020) 13:93–116 'Estimating the costs for the airport operator and airlines of a drone-related shutdown: an application to Frankfurt international airport'

[44] https://corporate.easyjet.com/~/media/Files/E/Easyjet/pdf/investors/rights-issue/2019-annual-report-and-accounts.pdf

€325,000 to €514,000[45] depending on the size of the airport. Therefore, even relatively small delays can impose significant costs on stakeholders and these costs are primarily incurred by airlines.

3.41 The risk of disruption caused by drones would likely continue under Option 1 and potentially increase as the use of both registered and recreational drones increases. Therefore, airlines are unlikely to prefer Option 1.

Dublin Airport Authority.

3.42 Under Option 1, the DAA would also likely have significant concerns about the threat of a major safety incident involving a drone (as identified above) noting that the DAAs *"priority is to deliver a safe and secure airport for all our passengers."*.[46]It is, therefore, unlikely to prefer options that would prevent it from taking the necessary actions to improve the safety and security of the airport.

3.43 Separately, these drone sightings (even where no incident occurs) impacts how the airport authority manages flights in and out of the airport. Arising from this risk, airport operations would be forced to stop operations for safety reasons if a drone is detected in restricted airspace. This is translated into unnecessary costs, time delays and a potentially negative reputation for the airport as an international destination.

3.44 Disruption to Dublin Airport could cost the DAA portions of its aeronautical revenue (e.g., landing charges) and non-aeronautical revenues (e.g., retail, food etc) due to travellers cancelling their plans or rescheduling flights through a different airport. For example, Gatwick Airport lost approximately €1.5 million arising from the December 2018 incident.[47] Furthermore, DAA would continue to suffer damage to its reputation arising from continued incidents, particularly where other European airports have measures in place to mitigate disruptions caused by drone activity. Moreover, the present issues at Dublin Airport could worsen as drones and drone ownership becomes more widespread. Indeed, rogue operators of drones may be emboldened by the fact the DAA would be unable to combat drones at Dublin Airport.

3.45 Further, drone incidents often result in planes being unable to land and instead having to circle the airport. An extra 30-minute airtime for a single commercial aircraft emits over 4,500 kgs of carbon into the atmosphere.[48] The additional flight time, while necessary from a safety perspective, is inconsistent with DAA's incentives for airlines

[45] European Union Aviation Safety Agency, Drone Incident Management at Aerodromes, 8 March 2021 Drone Incident Management at Aerodromes - Part 1 | EASA (europa.eu)
[46] Passenger Charter | daa
[47] Gatwick drone chaos cost airport £1.4m (thetimes.co.uk)
[48] Average fuel burn per minute of flight = 49 kg, Amount emitted (per kg of fuel burned) CO2 3.15 kg Standard Inputs for EUROCONTROL Cost-Benefit Analyses - Title (eurocontrol.int)

to reduce CO_2 emissions with new sustainability measures and practices[49].

3.46 Finally, ComReg notes that the DAA is already using the Device under a ComReg test licence and is seeking a longer-term licensing framework.

3.47 Therefore, the DAA is unlikely to prefer Option 1.

AirNav Ireland and IAA

3.48 Under Option 1, AirNav Ireland and IAA would both also likely have significant concerns about the threat of a major safety incident involving a drone (as identified in Para 3.32 - 3.34 above). Both are therefore unlikely to prefer options that would prevent it from taking actions that would improve the safety and security of the airport.

3.49 Drone sightings within the vicinity of the airport require air traffic controllers to make decisions about how flights should proceed. In line with protocols for confirmed drone sightings, operations are typically suspended. However, controllers also have to issue instructions to approaching and departing aircraft. For example, in relation to the February 3rd drone incident at Dublin airport:[50]

- The pilots of all departing flights were advised that operations at Dublin had been suspended and aircraft would not be taking off as a result of the sighting. Aircraft already taxiing to the runway for departure were advised to hold position.
- A Ryanair flight from Gatwick Airport in England already on approach to land, was instructed by air traffic controllers in Dublin to 'go around' after a drone was seen ‘over the airfield’. The crew aborted their landing and flew back out over the Irish Sea to await further instructions.
- The crew of Ryanair flight FR-113 from Gatwick to Dublin later opted to divert to Shannon.. Ryanair flights FR-7763 and FR-5150 from Alicante and from Glasgow respectively also diverted to Shannon.
- Other aircraft on approach to Dublin were placed in holding patterns over the Irish Sea while flights scheduled to depart were grounded as the reported drone sighting was investigated.

3.50 Air Traffic Controllers are key decision-makers in a dynamic environment involving many actors, constantly updating of relevant information, and, sometimes, conflicting goals. They often need to make difficult decisions with incomplete information, under time pressure. Drone sightings complicate this process further, increasing the challenge of managing air traffic in a safe manner.

[49] daa Incentivises Airlines To Reduce CO_2 Emissions With New Sustainability Measures | daa
[50] Flights diverted after drone sighting at Dublin Airport

3.51 Therefore, both AirNav Ireland and the IAA are unlikely to prefer Option 1.

MET Éireann

3.52 Under Option 1, the weather radar facility used by MET Éireann at Dublin Airport would not be impacted because the use of the Device would not be permitted. However, MET Éireann is unlikely to prefer Option 1 given the risk to safety and disruption at Dublin Airport.

Other affected stakeholders

3.53 Other resources are also required to deal with the drone sightings near airports. In particular, An Garda Síochána must investigate drone activity that occurs in or around airports and can be required at short notice where a sighting occurs. For example, the Gatwick Airport incident that disrupted more than 1,000 flights to and from Gatwick Airport last December led to policing costs of around €500,000[51]. Such stakeholders are unlikely to prefer Option 1 because disruptions would continue to persist, and scarce Gardaí resources would continue to be required.

Option 2 - Licence without conditions

Operators

3.54 Plum advises that emissions from the Device are generally at a level at which no interference would be expected to radio systems operating outside the [✂ ✂]. However, Plum also advises that there is a small possibility that interference may occur at the upper end of the [✂ ✂]. Therefore, the operators most likely to be affected by providing a licensing framework are [✂ ✂]

3.55 Under Option 1,[✂ ✂] could be exposed to a risk of interference through the use of the Device across much of North and South Dublin[54]. However, it should be noted overall that Plum considers the risk of interference to be low and the impact is unlikely to be serious given the proposed operational procedures[55].

3.56 In particular, Plum notes that [✂

[51] https://www.bbc.com/news/uk-england-47696499

[52]

[53]

[54] See Figure 4.1 of Plum Report for the geographic scope of the interference.

[55] Plum Report (Document 24/42A), p24.

[redacted]] Furthermore, these low risks are based on the "*worst case*" approach taken by Plum in its assessment of the C-UAS.[56] Therefore, the risk of interference is very low and any such risk would only arise in the event of a drone sighting within the 5km exclusion zone and, even where it did occur, it would only last for [✂ [redacted] ✂.]

3.57 While the risk of interference is low, the use of the Device absent any conditions governing its use (under Option 2) would likely increase that low interference risk. In particular, there would be no restrictions on power or maximum antenna gain, all of which would increase the risk of undue harmful interference if the Device was in use. ComReg also would be unaware of when the Device was in use and therefore unable to monitor whether undue harmful interference was occurring in practice.

3.58 [✂ [redacted] ✂.]

3.59 Therefore, operators are highly unlikely to prefer Option 2.

Airlines

3.60 Under Option 2, the safety risks described previously would be reduced because a drone could be intercepted by the Device reducing the time that the drone is in the vicinity of any aircraft. However, airlines may have residual concerns that the operation of the Device could result in undue harmful interference to them while protecting radiocommunication services operating in the airfield.

3.61 In relation to losses due to airport closures and flight suspensions, because an effective counter drone solution requires a number of technologies to monitor, detect and remove unauthorised drones, the deployment of a Device at Dublin Airport of itself is unlikely to eliminate the requirement to suspend operations or divert flights during an unauthorised drone incident at the airport. However, it should limit the duration of any suspension. Therefore, the economic harm to airlines as described under Option 1 would be reduced but not removed.

3.62 Notwithstanding, such a situation would represent an improvement on the *status quo*

[56] Plum takes this approach because the complex waveform emitted by the device make its characterisation difficult and as such it is impossible to predict its impact on some specific radio systems with any certainty.
[57] Plum has advised that the C-UAS device integrates a set of jamming transmitters with[✂ [redacted]]

and airlines would likely prefer Option 2 over Option 1.

Dublin Airport Authority

3.63 For similar reasons, DAA would likely prefer Option 2 because it reduces safety risk and the disruption caused by drones which reduces the impacts on DAA described under Option 1.

AirNav Ireland & IAA

3.64 Under Option 2, air traffic controllers would likely welcome the use of the Device to reduce the risk of drone related incidents and impacts described under Option 1. In that regard, AirNav Ireland and IAA are both likely to prefer Option 2 over Option 1.

3.65 However, as previously noted, there are a number of critical safety systems, including radiocommunication systems operated by either AirNav Ireland or IAA at Dublin Airport, which are essential to the safe operation of aircraft into and out of the airport. These services include, aeronautical radars, surface movement radars, and air traffic control communications. The apparatus associated with these different services is sited at a number of different locations throughout the airport with some located at the runways and others at the air traffic control tower or the terminal building. It is essential that undue harmful interference is not created through the use of the Device that would cause such apparatus to function in a sub-optimal fashion. While the DAA would likely provide assurances to both AirNav Ireland and IAA under this Option, AirNav Ireland and IAA are both likely to prefer options which provide additional assurances over the use of this equipment in line with respective safety and operational procedures.

3.66 Therefore, while AirNav Ireland and IAA are both likely to prefer Option 2 over Option 1, both may have residual concerns regarding the potential for undue interference to certain safety and operational systems.

MET Éireann

3.67 Under Option 2, the weather radar facility used by MET Éireann at Dublin Airport is potentially open to interference. However, and as described in Chapter 3 of Document 24/42, ComReg's measurements at Dublin Airport, taken when the device was being tested, did not give rise to any reports of interference or disruption to the operation of the meteorological radar at Dublin Airport, nor has ComReg received any complaints to that end since the Device was licensed.

3.68 Therefore, MET Éireann is unlikely to have any concerns about interference under Option 2

Option 3 - Licence with conditions

Operators

3.69 Under Option 3, the risk of undue harmful interference to operators [✂ [redacted] ✂] through the use of the Device would be reduced compared to Option 2. This is because the use of the Device would be governed by a set of licence conditions that have been designed to ensure the efficient management and use of the radio spectrum by minimising the potential for such interference. Therefore, an already low risk of undue harmful interference would be further reduced. In summary:

- The deployment of a Device by DAA would be limited to Dublin Airport only and the system cannot be used outside of the Airport perimeter (Section 3.5).
- All instances of Device use, without exception, must be reported to ComReg within 24 hours, which would enable ComReg to appropriately respond to any corresponding reports of harmful interference to radiocommunications services operating in and around Dublin Airport. (Section 3.5.3)
- DAA would be required to provide an annual report to ComReg, on the anniversary of the grant of licence, which would report on various criteria designed to ensure that ensure that any harmful interference is monitored and minimised.
- Technical conditions that ComReg proposes to attach to the use of the Device by DAA at Dublin Airport have been chosen to provide a degree of predictability regarding interference to radio spectrum users, whilst permitting the operation of the specific device[59] (See Table 2)

3.70 Therefore, operators are likely to prefer Option 3 over Option 2.

Airlines

3.71 Under Option 3, the risk of disruption caused through the use of drones would be reduced in the same way as Option 2. (i.e., it would limit the duration of any suspension thereby reducing the overall adverse impact of a drone incident). However, there would be less risk of harmful interference to the protected radiocommunication services operating within the confines of the airfield (see impact on AirNav Ireland and IAA) below.

[58] [redacted]

[59] Plum Report, Appendix A.

3.72 Therefore, airlines are likely to prefer Option 3 over other options.

Dublin Airport Authority

3.73 Option 3 would provide the same benefits to DAA as Option 2 except DAA would be subject to certain licence conditions. These licence conditions would permit DAA to use its preferred Device at Dublin Airport while the technical conditions would not restrict the capability of that device to intercept drones. The main impact on the DAA involves the reporting obligations regarding the use of the Device. While such reporting obligations are essential to ensure the effective management of the radio spectrum, they are unlikely to impose any significant costs on DAA. Further, and in any event, DAA is likely to be happy to comply with any obligation imposed on it by IAA or AirNav Ireland to protect radiocommunication services operating in the airfield.

3.74 Therefore, DAA is likely to prefer either Option 2 or Option 3.

AirNav Ireland and IAA

3.75 Under Option 3, both AirNav Ireland and the IAA would receive the same benefits as Option 2 except both would be provided with additional assurances arising from the proposed conditions that would require DAA to comply with any obligations imposed on it by IAA or AirNav Ireland in order to protect radiocommunication services operating in the airfield.

3.76 Therefore, both AirNav Ireland and IAA would likely prefer Option 3 over all other options.

MET Éireann

3.77 Option 3 would have the same impacts as Option 2 except the Device would be subject to licence conditions, including certain operational procedures that would provide additional protection by avoiding interference that could be caused by the incorrect use or operation of the Device.

3.78 Therefore, MET Éireann is likely to prefer Option 3 over Option 2.

Conclusion on impact on stakeholders

3.79 In light of the above, ComReg is of the view that stakeholders would prefer Option 3 because it is the option that best allows DAA to reduce safety and disruption risks, while also minimising the potential for interference for other users of the radio spectrum.

3.5.3 Impact on competition

3.80 As outlined earlier, (see Policy Issues and Objectives) there are different elements

to competition that are relevant in determining the impact of any of the preferred options. ComReg's objectives in exercising its functions are set out in Section 12 of the Act. In so far as the promotion of competition is concerned, the primary assessment with respect to this consultation involves an assessment of which options best encourage the efficient use and ensuring the effective management of radio frequencies and numbering resources.[60] In particular, the option most in line with ComReg's obligation to promote competition and the effective management of the radio frequencies will be the option that minimises the level of interference associated with the use of the Device.

Option 1 - No licencing framework

3.81 Under Option 1, there would be no impacts to competition because the Device would not be permitted to be used in Dublin Airport.

Option 2 v Option 3

3.82 The use of the use of the Device creates the possibility of undue harmful interference in the following ways:

I. First, harmful interference could occur in the bands which the Device is designed to operate.

II. Second, spurious emissions from the Device could create harmful interference in bands adjacent to the bands which the Device is designed to operate,

3.83 **In relation to I**, absent conditions preventing same, the Device could operate in [✂ ✂] The activation of the Device in these frequency bands may potentially affect a wide range of services authorised to operate in these bands. For example:

- [✂ ✂]
- [✂ ✂]
- [✂ ✂]

[60] Section 12(2)(a) of the 2002 Act.

- [✂ ✂]

3.84 Under Option 2, DAA would be permitted to use the Device in [✂ ✂]

3.85 **In relation to II**, Plum advises that measurements undertaken on behalf of the C-UAS manufacturer, and confirmed by Plum, show that emissions from the Device are generally at a level at which no interference would be expected to radio systems operating outside the bands targeted by the jamming signal. However, Plum also advises that the main exception to this is [✂ ✂]

3.86 As noted in the 'Impact on Stakeholders' above, the risk of such interference in adjacent bands is low (e.g., risks are based on the "*worst case*" scenario and any such risk would only arise in the event of a drone sighting within the 5km exclusion zone and even where it did occur it would only last [✂ ✂] However, these risks are higher under Option 2 because there would not be any conditions governing its use (e.g. higher power and/or antenna gain parameters could be used by the C-UAS operator compared to Option 3) and ComReg would have little opportunity to effectively manage the relevant radio frequencies because there would be no obligations on DAA to report, in a timely manner, instances of the Device being used or other reporting requirements to ensure the Device is being used correctly (i.e. the annual reporting requirements).

3.87 Alternatively, under Option 3, the risk of interference is lower compared to Option 2 because the technical conditions specify the maximum power output and antenna gains. Further the drone incident reporting requirement (within 24 hours) would allow ComReg to closely monitor whether the Device is being used in accordance with the proposed licence conditions, while also monitoring potential interference issues relating to the operation of the Device. This would enable ComReg to appropriately respond to any corresponding reports of harmful interference to radiocommunications services operating in and around Dublin Airport.

3.88 Further, where operators have interference issues, ComReg would have information to hand allowing it to determine whether the source of that interference was, in fact,

resulting from the deployment of the Device. Such spectrum management activities (which could only be achieved under Option 3) are essential in minimising the potential for interference in adjacent bands, while at the same time allowing DAA to make use of the Device which is now permitted under recent legislative changes.

3.89 In light of the above, ComReg is of the view that competition is best served by Option 3 which provides for the use of the Device but also minimises the potential for interference in the devices operating and adjacent bands, thereby best ensuring the effective management of the radio spectrum.

3.5.4 Impact on consumers

Option 1

3.90 Under Option 1 DAA would not be permitted to use the Device and consumers would remain exposed to a risk (albeit low) of injury or death.

3.91 Further, the risk of disruption to services would continue to occur and potentially expand in line with the proliferation of drone usage across the country. As illustrated in Figure 1, nearly 32 million passengers passed through Dublin Airport in 2023 and these passengers would be exposed to the risk of disruption. Further, over 80% of Irish consumers typically plan to travel abroad.[61]

3.92 The impact on consumers due to delayed and/or cancelled flights is far from negligible, and these events impose costs on consumers and passengers. Longer flight times arising from circling the airport leave passengers spending leisure time in the air that could be used more productively or enjoyably on the ground. Cancelled flights cause frustration and wasted journeys. Uncertainty about arrival and departure times leads to inconvenience and can leave travellers stranded on the runway or in the departure lounge. Furthermore, even short delays can impact consumers forward travel plans resulting in missed trains, buses or connecting flights.

3.93 Recently, AirHelp, the world's largest air passenger rights organisation surveyed consumers[62] and found that:

- 73% of respondents ranked waiting for long periods of time as a major frustration the biggest problem for passengers;
- 71% and 68% of respondents respectively, stated that they were very frustrated with these problems that resulted in them arriving at their destination at an inconvenient time and being stressed; and

[61] More than 80% of Irish consumers plan to travel abroad this year, survey finds – The Irish Times
[62] https://www.airhelp.com/en-ie/press/airhelp-survey-what-does-flight-disruption-cost-passengers/

- 72% of those surveyed spent money they had not planned to spend, with the biggest outgoings relating to alternative travel, food, drink, and accommodation.

3.94 Drone incidents can delay significant numbers of passengers. For example, the March 2023 incident at Dublin Airport which lasted for around 30 minutes resulted in 20,000 passengers being affected by disruption caused by the drone.[63] More serious incidents such as the drone incident at Gatwick airport in 2018 affected 140,000 passengers.

3.95 Therefore, consumers are highly unlikely to prefer Option 1.

Option 2 v Option 3

3.96 While consumers would prefer an option that reduces the safety and disruption risks at airport, they would prefer options which also minimises interference with devices and services that they use. With that in mind, both Options 2 and 3 would reduce safety and disruption concerns at Dublin Airport that occur under Option 1. However, and as described in 'Impact on Competition' under Option 2, the range of devices that would be subject to interference could be substantial, noting that it includes important devices such as medical implants and hearing aids. Alternatively, under Option 3 the range of devices which use [✂ ✂]

3.97 In relation to the bands in which the Device operates, the uses likely to be of most concern would be the impact on [✂ ✂.]

3.98 Therefore, consumers are likely to prefer Option 3.

3.5.5 Overall preferred option

3.99 In light of the assessment above, ComReg is of the view that the overall preferred option is Option 3.

3.100 ComReg is also of the view, having regard to the applicable legislation and legal principles, its RIA and other analyses, its expert advice and reports, and the material to which it has had regard, that the Overall Preferred Option is objectively justified, proportionate, and non-discriminatory. In particular, the preferred option:

[63] Ryanair Calls for Eamon Ryan's Resignation Over Drone Closures at Dublin Airport (businessplus.ie)

- is objectively justified given the detailed assessment provided in this RIA, including that the preferred option is that which would facilitate tDAA's use of the Device whilst also minimising the potential for interference to other wireless services;

- takes all reasonable measures to encourage efficient use and ensure effective management of the radio spectrum and its objective to promote competition under section 12 of the 2002 Act, including monitoring and supervising compliance by DAA with the obligations of the Licence.

- would not give rise to discrimination in the treatment of undertakings because only DAA is permitted to use the Device following the recent legislative changes (See Chapter 2 of Document 24/42)

- is proportionate because, among other things, there does not appear to be less onerous means by which these objectives and principles could be achieved. In particular:

    - the public benefit associated with operating the Device to deal with a drone that poses a risk to public safety and creates significant disruption to consumers would outweigh any adverse effects and consequences associated with incidental interference of a short duration being caused to the devices and services operating in the relevant bands.; and

    - [✂ ✂]

3.101 Accordingly, in light of the above and on the basis of the information currently before it, ComReg is of the view that the DAA should be able to apply for a licence subject to certain conditions.

Chapter 4

4 Decision Instrument

This chapter sets out a final decision document based on the views expressed by ComReg in the preceding chapters.

DECISION

1. DEFINITIONS AND INTERPRETATION

1. In this Decision, save where the context otherwise admits or requires:

"Communications Regulation Act 2002" means the Communications Regulation Act, 2002, (No. 20 of 2002), as amended;

"ComReg" means the Commission for Communications Regulation, established under section 6 of the Communications Regulation Act 2002;

"Counter-UAS" (C-UAS) means a system for the detection, classification, monitoring or neutralisation of an unauthorised UAS;

"Counter UAS Licence" means a licence of the type set out in draft form in Schedule 1 to the Counter UAS Regulation;

"Dublin Airport Authority" means the operator of Dublin airport holding a certificate issued in accordance with Article 36 of Regulation (EU) 2018/1139;

"EASA" means the European Union Aviation Authority;

"Minister" means the Minister of Communications, Climate Action and Environment;

"Licence" means a licence granted in accordance with section 5 of the Act of 1926 in accordance with and subject to the matters prescribed in these Regulations to keep, have possession of, install, maintain, work and use Apparatus in a specified place in the State granted to the licensee;

"Duration of Licence" means the duration of time from the commencement date that the Licensee is licensed to use the Counter-UAS as set out Schedule 1 to the Counter UAS Licence Regulations;

"Licence Fee" means the fee associated for the Counter-UAS as set out in Schedule 2 to the Counter UAS Licence Regulations;

"Counter UAS Regulation" means the Wireless Telegraphy (Counter UAS Licence) Regulations 2024, as set out in draft form in Annex 1 to ComReg Document 24/77;

"unmanned aircraft system" ('UAS) means an unmanned aircraft and the equipment to control it remotely, including any electronic device;

"Wireless Telegraphy Act 1926" means the Wireless Telegraphy Act, 1926 (No. 45 of 1926), as amended.

2. DECISION-MAKING CONSIDERATIONS

2. In arriving at its decisions in this document, ComReg has had regard to:

   i. the contents of, and the materials and reasoning referred to in the below listed ComReg documents:

      a) 24/77

   ii. the consultants' report commissioned, and the advice obtained by ComReg, in relation to the subject-matter of the documents and materials listed above,

   iii. the powers, functions, objectives and duties of ComReg, including, without limitation those under and by virtue of:

      a) the Communications Regulation Act 2002, and, in particular, sections 10, 12 and 13 thereof;

      b) Sections 5 and 6 of the Wireless Telegraphy Act 1926; and

      c) the applicable Policy Directions made by the Minister under section 13 of the Communications Regulation Act 2002,

      and, noting that it has: d) given all interested parties the opportunity to express their views and make their submissions,

   as set out in the various chapters of Document 24/77.

3. DECISIONS

3. Having had regard to the above considerations, ComReg has decided:

   i. subject to obtaining the consent of the Minister to the making by it of the Counter UAS Regulations, to make those regulations under section 6 of the Wireless Telegraphy Act 1926, prescribing relevant matters in relation to Counter UAS Licences, including prescribing:

      a) the form of such Licences;

      b) the period during which such Licences shall continue in force;

c) the manner in which, the terms on which, and the period or periods for which such Licences may be renewed;

d) the circumstances in which or the terms under which such Licences are granted;

e) the circumstances and manner in which such Licences may be suspended or revoked;

the terms and conditions to be observed by the holders of such Licences and subject to which such Licences are deemed to be granted;

g) the fees to be paid on the application, grant or renewal of such Licences, and the time and manner at and in which such fees are to be paid; and

h) matters which such Licences do not entitle or authorise the holder to do.

ii. upon application properly being made to it by the Dublin Airport Authority for a Counter UAS Licence to grant a licence, under section 5 of the Wireless Telegraphy Act 1926 to DAA for the periods, and subject to the conditions and restrictions (including conditions as to renewal, suspension and withdrawal), prescribed in the Counter UAS Regulations as currently set out in Annex 1of Document 24/77.

Duration and renewal of a Licence

iii. that a Licence shall, unless it has been revoked, withdrawn or surrendered, remain in force from the date of grant for a period of one year unless renewed.

iv. that a Licence may be renewed from time to time by the Commission subject to the matters prescribed in the Counter UAS Regulations as currently set out in Annex 1 of Document 24/77.

v. that a Licence shall fully expire on the third anniversary of its initial grant.

Licence conditions

vi. that the terms and conditions to be observed by a Licence holder and subject to which a Licence is deemed to be granted shall be those prescribed in the Counter UAS Regulations, as currently set out in Annex 1 of Document 24/77, and in the Licence.

Licence Fees

vii. that the fees to be paid on the application, grant or renewal of a Licence, and the time and manner at and in which such fees are to be paid, shall be those as prescribed in Schedule 2 of the Counter UAS Regulations, as currently set

out in Annex 1 of Document 24/77.

4. EFFECTIVE DATE

4. This Decision Instrument shall come into force on the day of its making.

5. MAINTENANCE OF OBLIGATIONS

5. If any section or clause contained in this Decision Instrument is found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that section or clause shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining section(s) or clause(s) of this Decision Instrument and shall not in any way affect the validity or enforcement of this Decision Instrument.

6. STATUTORY POWERS NOT AFFECTED

6. Nothing in this document shall operate to limit ComReg in the exercise of its discretions or powers, or the performance of its functions or duties, or the attainment of objectives under any laws applicable to ComReg from time to time.

ROBERT MOURIK
COMMISSIONER
THE COMMISSION FOR COMMUNICATIONS REGULATION
THE 23 of SEPTEMBER 2024

Chapter 5

5 Next Steps

5.1 ComReg envisages that the next step in this process will be the making and publication of the licensing regulations under Wireless Telegraphy Acts following the obtaining of the required consent of the Minister.

Annex 1: Draft Regulations

STATUTORY INSTRUMENTS

S.I. No. of 2024

WIRELESS TELEGRAPHY (COUNTER UAS LICENCE) REGULATIONS 2024

S.I. No. of 2024

WIRELESS TELEGRAPHY (COUNTER UAS LICENCE) REGULATIONS 2024

The Commission for Communications Regulation, in exercise of the powers conferred on it by section 6(1) of the Wireless Telegraphy Act 1926 (No. 45 of 1926) as substituted by section 182 of the Broadcasting Act 2009 (No. 18 of 2009), and with the consent of the Minister for the Environment, Climate and Communications (as adapted by the Communications, Climate Action and Environment (Alteration of Name of Department and Title of Minister) Order 2020 (S.I. No. 373 of 2020)) in accordance with section 37 of the Communications Regulation Act 2002 (No. 20 of 2002), hereby makes the following Regulations:

Citation

1. These Regulations may be cited as the Wireless Telegraphy (Counter UAS Licence) Regulations 2024.

Interpretation

2. (1) In these Regulations, except where the context otherwise requires:

"Act of 1926" means the Wireless Telegraphy Act 1926 (No. 45 of 1926);

"Act of 1972" means the Wireless Telegraphy Act 1972 (No. 5 of 1972);

"Act of 2002" means the Communications Regulation Act 2002 (No. 20 of 2002);

"Apparatus" means apparatus for wireless telegraphy as defined in section 2 of the Act of 1926;

"Commission" means the Commission for Communications Regulation established under the Act of 2002;

"Counter-UAS" or "C-UAS" means a system for the detection, classification, monitoring or neutralisation of an unauthorised UAS;

"Dublin Airport Authority" or "DAA" means the operator of Dublin airport holding a certificate issued in accordance with Article 36 of Regulation (EU) 2018/1139;

"EECC Regulations" means the European Union (Electronic Communications Code) Regulations 2022 (S.I. No. 444 of 2022);

"Harmful Interference" has the meaning set out in the EECC Regulations;

"Licence" means a licence granted in accordance with section 5 of the Act of 1926 in accordance with and subject to the matters prescribed in these Regulations to keep, have possession of, install, maintain, work and use Apparatus at the State airport known as Dublin airport granted to the licensee;

"Licensee" means the holder of a Licence; and

"Unmanned Aircraft System" or "UAS" means an unmanned aircraft and the equipment to control it remotely, including any electronic device; and

(2) In these Regulations –

(a) a reference to Regulation or a Schedule is to a Regulation of, or a Schedule to, these Regulations, unless it is indicated that reference to some other enactment is intended;

(b) a reference to a paragraph or subparagraph is to the paragraph or subparagraph of the provision in which the reference occurs unless it is indicated that reference to some other provision is intended;

(c) A word or expression that is used in these Regulations and that is also used in the Act of 1926 has, unless the context otherwise requires, the same meaning in these Regulations that it has in that Act;

(d) A word or expression that is used in these Regulations and that is also used in the Act of 2002 has, unless the context otherwise requires, the same meaning in these Regulations that it has in that Act;

Licences to which these Regulations apply

3. These Regulations apply to Licences for C-UAS.

Limitation of Licence

4. (1) A Licence granted under these Regulations does not grant to the Licensee named therein any right, interest or entitlement other than the right to keep, install, maintain, work and use, at the State airport known as Dublin airport, only the Apparatus specified in the Licence.

(2) Nothing in these Regulations shall absolve the Licensee from any requirement in law to obtain such additional approvals, consents, Licences, permissions and authorisations that may be necessary for the discharge of the obligations or the exercise of entitlements under the Licence. The Licensee is responsible for all costs, expenses and other commitments, financial and non-financial, in respect of the Licence and the Commission shall bear no responsibility for such costs, expenses or commitments.

Application for Licences and Form of Licences

5. (1) An application for a Licence under these Regulations will be made by DAA to the Commission and shall be in writing and in such form as may be determined by the Commission.

(2) A person who makes an application under paragraph (1) of this Regulation shall furnish to the Commission such information as the Commission may reasonably require for the purpose of assessing the application and carrying out its functions under the Act of 1926 and the Act of 2002 and, if the person, without reasonable cause, fails to comply with this paragraph, the Commission may refuse to grant a Licence to the person.

(3) The grant of a Licence is subject to payment of the prescribed fee as set out in Schedule 2 to these Regulations.

(4) Subject to Regulation 7, a Licence shall be in the form specified in Schedule 1 with such variation, if any, whether by addition, deletion or alteration as the Commission may determine from time to time or in any particular case.

Duration and Renewal of Licences

6. (1) A Licence shall, unless it has been revoked or had its duration reduced under Regulation 8, remain in force from the date of grant for a period of one year unless renewed under these Regulations.

(2) A Licence may be renewed from time to time by the Commission under this Regulation.

(3) Prior to the expiration of a Licence, the Commission may, by notice in writing given to the Licensee or sent to the Licensee at the address of the Licensee specified in the Licence, renew the Licence for one year from the day following the expiration of the last previous period during which it was in force. The granting or renewal of a Licence shall be subject to the payment of the relevant fees in advance of the grant or expiry date and shall not be construed as warranting that the Licence shall be renewed at any time in the future.

(4) In considering whether to renew a Licence, the Commission shall have particular regard to:

(a) whether the Licensee has complied with these Regulations and the conditions attached to the expiring Licence;

(b) the efficient management and use of the radio spectrum; and

(c) the avoidance of Harmful Interference.

(5) Notwithstanding paragraphs (1) to (4) of this Regulation, a Licence that is granted or renewed on or after the second anniversary of the first issue of a Licence under these Regulations shall fully expire on the third anniversary of such issue.

Conditions of Licences

7. (1) It shall be a condition of a Licence that:

(a) the Licensee shall comply with these Regulations and the conditions attached to the Licence;

(b) the Licensee shall ensure that the Apparatus is used only on such radio frequency spectrum as may be specified in the Licence;

(c) the Licensee shall make payments of the fees as set out in Schedule 2 to these Regulations, and in accordance with Regulation 9 of these Regulations;

(d) the Licensee shall request the Commission to consider and decide on an amendment to the Licence to reflect any proposed changes to the information contained in the Licence;

(e) the Licensee shall furnish such information and reports in respect of the Licence, including relating to the Apparatus and its use, as may be requested by the Commission from time to time;

(f) the Licensee shall ensure compliance with any special conditions imposed under section 8 of the Act of 1972 and subject to which this Licence is deemed by subsection (3) of that section to be issued;

(g) the Licensee shall ensure that, save as may be required by law, access to, and use of, the Apparatus is restricted to the Licensee, employees or agents of the Licensee, and persons authorised by or on behalf of the Licensee;

(h) where the Commission is satisfied that a Licensee has failed to comply with any provision of these Regulations or a condition of the Licence, and the Commission has served on the Licensee a written notice prohibiting the use of Apparatus by such date and time as may be specified in the notice, then the Licensee will cease to use that Apparatus on or before the applicable date and time until such notice has been withdrawn by the Commission, and the Licensee shall take such measures as may be specified by the Commission in the notice;

(i) the Licensee shall upon becoming aware of any event likely to materially affect their ability to comply with these Regulations, or any conditions set out or referred to in the Licence, notify the Commission of that fact in writing within 5 working days; and

(j) the Licensee shall on request from an authorised officer of the Commission permit the inspection of the Apparatus, enable access to the site or sites on which the Apparatus is located and produce the associated Licence for inspection.

Enforcement, Amendment, Revocation and Suspension

8. (1) Enforcement by the Commission of compliance by the Licensee with conditions attached to their Licence shall be in accordance with the Act of 1926.

(2) The Commission may amend the Licence from time to time where objectively justifiable and in a proportionate manner. Any amendment shall be made subject to and in accordance with the Act of 1926.

(3) A Licence may be suspended or revoked by the Commission in accordance with the Act of 1926.

Licence Fees

9. (1) Fees as set out and provided for in the fees table in Schedule 2 are hereby prescribed in relation to Licences for the purpose of section 6 of the Act of 1926, as amended.

(2) The fees set out and provided for in Schedule 2 shall be payable by the Licensee to the Commission prior to the grant or renewal of a Licence.

(3) Fees shall be paid to the Commission by way of electronic funds transfer or such other means, and on such terms (including terms as to the place of payment) as the Commission may decide. Where the date of payment falls on a Saturday, a Sunday or a public holiday payment shall be made on or before the last working day before the date of payment.

(4) Fees for any period of less than one year shall be calculated on a pro-rata monthly basis for such period.

(5) If a Licence is surrendered by the Licensee, the Licensee may be entitled to a refund on a pro-rata monthly basis for the remaining period of the Licence of the relevant fee.

(6) If a Licence is suspended or revoked due to a finding by ComReg of non-compliance with any relevant licence conditions, the Licensee shall not be entitled to be repaid any part of the fee paid by the Licensee, but shall still be liable to pay any sums, including interest, that are outstanding.

(7) An amount payable by a Licensee may be recovered by the Commission as a simple contract debt in any court of competent jurisdiction.

SCHEDULE 1 WIRELESS TELEGRAPHY ACT, 1926

WIRELESS TELEGRAPHY (COUNTER UAS LICENCE) REGULATIONS, 2024

LICENCE CERTIFICATE

Part 1

Licence Number: .....

The Commission for Communications Regulation, in exercise of the powers conferred on it by section 5 of the Wireless Telegraphy Act, 1926 (No. 45 of 1926), transferred to the Commission for Communications Regulation by section 4 of the Communications Regulation (Amendment) Act, 2007 (No. 22 of 2007), grants to the Licensee specified, authorisation to keep, have possession of, install, maintain, work and use only the apparatus as specified in Part 2 of this Licence subject to the Licensee observing the conditions contained in Regulation 7 of the Wireless Telegraphy (Counter UAS Licence) Regulations, 2024 (S.I. X of 2024)

Licensee: .....

Address: .....

Licence Type: .....

Commencement and Termination Dates (if applicable):

The Licence comes into effect on DD/MM/YY and, subject to revocation or suspension, expires on DD/MM/YY unless renewed in accordance with these Regulations.

Signed: .....

on behalf of the Commission for Communications Regulation

Date: .....

Part 2

Licence Details

Description and Characteristics of Apparatus

Make	
Model	
Serial Number	

Operational Conditions of Apparatus

Location and Direction of Operation

1) The Licensee shall only operate the Apparatus at the State airport known as Dublin airport.
2) The Licensee shall operate the Apparatus in accordance with any restrictions and obligations imposed by the Irish Aviation Authority or the Irish Air Navigation Service.

Drone Incident Reporting

1) The Licensee shall notify the Commission within 24 hours of any activation of the Apparatus.

Inspection and Decommissioning

1) The Licensee shall make the Apparatus available to the Commission for inspection and testing at any time.
2) The Licensee shall inform the Commission is the Apparatus is decommissioned prior to its annual renewal date.

Annual Reporting Requirements

1) The Licensee shall provide to the Commission an annual report on the anniversary of the grant of a Licence which will, at a minimum, include the following:
    a. Details of the times and dates when the Apparatus was activated in the previous 12-month period;
    b. For each activation identified in (a), details of the impact, if any, on radiocommunications operating in the aerodrome;
    c. Proof of the annual calibration of the Apparatus to ensure that it still operates as per its licence conditions;
    d. The standard operating procedure for the authorisation and use of the Apparatus.
    e. A complete list of all personnel authorised to use the Apparatus; and
    f. Evidence of training of all personnel authorised to use the Apparatus.

Technical Conditions of Apparatus

Power into Antenna

Antenna Gain

Occupied Bandwidth

Power Spectral density

SCHEDULE 2 FEES PAYABLE

The annual payable fees for a Counter-UAS Licence are as follows:

(i) a once-off, upfront fee of **€25,000** which would be paid prior to the initial grant of the Licence; and

(ii) an annual fee, index-linked,[64] that is paid at the beginning of each year over the duration of the Licence. The annual fee in the first year of the Licence is **€9,500**.

GIVEN under the Official Seal of the Commission for Communications Regulation,

2024

On behalf of the Commission for Communications Regulation

The Minister for the Environment, Climate and Communications (as adapted by the Communications, Climate Action and Environment (Alteration of Name of Department and Title of Minister) Order 2020 (S.I. No. 373 of 2020)), in accordance with section 37 of the Communications Regulation Act, 2002, consents to the making of the foregoing Regulations.

GIVEN under the Official Seal of the Minister for the Environment, Climate and Communications

2024

Minister for the Environment, Climate and Communications.

[64] Annual fees are index-linked to the overall Consumer Price Index ("CPI") as published by the Central Statistics Office of Ireland (or its successor).

EXPLANATORY NOTE

(This note is not part of the Instrument and does not purport to be a legal interpretation.)

These Regulations provide for the issue of Licences for Apparatus for Wireless Telegraphy for the provision of C-UAS by the Dublin Airport Authority at Dublin airport, for the regulation of such Apparatus, and for the payment of fees by persons granted Licences for that Apparatus.