



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Publication of Radio Spectrum Licence Information

Response to Consultation and Decision

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An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

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Chapter 1

1 Executive Summary

Introduction

- 1.1 The Commission for Communications Regulation (“**ComReg**”) is the statutory body responsible for the regulation of the electronic communications, (telecommunications, radio communications and broadcasting transmission networks), postal and premium rate sectors in Ireland in accordance with European Union (“**EU**”) and Irish law. ComReg also manages Ireland’s radio spectrum (or “**spectrum**”) and the national numbering resource.
- 1.2 In accordance with relevant ministerial policy directions given under section 13 of the Communications Regulation Act, 2002¹, as amended (the “**2002 Act**”), ComReg’s spectrum management objective is to ensure the efficient management and use of the radio frequency spectrum².
- 1.3 ComReg is obliged to effectively carry out this function, with regard to the relevant government policy statements and international developments. ComReg also has the general objective of promoting competition in the provision of electronic communication networks and associated facilities³.
- 1.4 ComReg is responsible for managing the assignment of the radio spectrum to various users⁴ who require and request access, these include: the electronic communications market, including electronic network and service providers, equipment manufacturers, broadcasters, public bodies, utilities, private companies and individuals. Information relating to radio spectrum is a key requirement for the interested parties.
- 1.5 ComReg recognises that the quality and availability of information on radio spectrum helps to facilitate the entry of new players into the electronic communications market and can reduce network and service deployments.

¹ [Communications Regulation Act, 2002, Section 13 \(irishstatutebook.ie\)](https://www.irishstatutebook.ie/eli/2002/si/444/made/en/print)

² Communications Regulation Act 2002, section 12(1)(b)

³ Regulation 4(3)(b) of S.I. 444 of 2022, the European Union (Electronic Communications Code) Regulations 2022: <https://www.irishstatutebook.ie/eli/2022/si/444/made/en/print>.

⁴ The services include mobile communication services, satellite services, air traffic control and broadcasting services among others.

- 1.6 Ease of access and availability of high-quality information is also important for the existing users of spectrum and its associated facilities. Such information helps to ensure the efficient management of the radio spectrum, for example inter-operator interference analysis, and aligns with government policy and international developments.
- 1.7 Currently, ComReg has in excess of 22,000 active radio spectrum licences and publishes base station location information in respect of mobile and broadband licences⁵ on its Siteviewer webpage. Siteviewer⁶ is an interactive map of Ireland where the following Mobile & Wireless Broadband licence information, is currently published:
- the location of every mobile network base station;
 - the operator which owns or controls each mobile network base station; and
 - the types of wireless communication standards provided at those locations.
- 1.8 That information on the apparatus and site locations in the schedules of mobile and wireless broadband licences is updated annually and the non-confidential version of this information is set out on ComReg's website.⁷
- 1.9 Additionally, ComReg publishes licence information regarding fixed wireless access local area ("**FWALA**") licences⁸ on its FWALA interactive map⁹ and third-party business radio licences¹⁰.

⁵ <https://www.comreg.ie/industry/radio-spectrum/licensing/search-licence-type/mobile-licences-3/>

⁶ ComReg's interactive map of Ireland that currently provides information for a broad range of stakeholders, such as electronic communication network and service ("ECN/S") providers, infrastructure developers such as wind farm developers, and members of the public, who wish to know base station locations and the services provided from those locations. <https://siteviewer.comreg.ie/#explore>, this is different to the Mobile Coverage Map.

⁷ <https://www.comreg.ie/industry/radio-spectrum/licensing/search-licence-type/mobile-licences-2/>

⁸ <https://www.comreg.ie/industry/radio-spectrum/licensing/search-licence-type/fixed-wireless-access-local-area-fwala/>

⁹ <https://siteviewer.comreg.ie/fwala/>

¹⁰ <https://www.comreg.ie/industry/radio-spectrum/licensing/search-licence-type/business-radio/#:~:text=Unlike%20traditional%20Business%20Radio%20licences,or%20by%20each%20third%20party>

ComReg Document 24/13

- 1.10 In February 2024, ComReg published ComReg Document 24/13¹¹, the “Publication of Radio Spectrum Licence Information”, the (“**Consultation**”). This Response to Consultation and Decision Document presents ComReg’s conclusions and Decision with regard to the publication on Siteviewer of the radio spectrum licence information (the “**Radio Spectrum Information**”), which ComReg considers is “environmental information” as defined within the Access to Information on the Environment Regulations 2007¹², as amended, (the “**AIE Regulations**”), and Directive 2003/4/EC¹³ (the “**AEI Directive**”).
- 1.11 In its Consultation, ComReg proposed to publish Radio Spectrum Information in respect of both fixed link licences¹⁴ and satellite earth station licences, which together account for approximately 70% (16,400) of the total radio spectrum licences (22,000).
- 1.12 ComReg proposed that this Radio Spectrum Information would include:
- ComReg’s licence reference number;
 - Licensee Name;
 - Licence Type;
 - Licence commencement and expiry date;
 - Location coordinates of apparatus and stations;
 - Frequency band(s);
 - Channel number;
 - Frequency assignment;
 - Frequency bandwidth;
 - Output power;

¹¹ ComReg Document 24/13 – Publication of Radio Spectrum Licence Information – published 19 February 2024: <https://www.comreg.ie/publication/publication-of-radio-spectrum-licence-information>

¹² The European Communities (Access to Information on the Environment) Regulations 2007 to 2014 (S.I. No. 133 of 2007, S.I. No. 662 of 2011, S.I. 615 of 2014 and S.I. 309 of 2018).

¹³ DIRECTIVE 2003/4/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003L0004>.

¹⁴ <https://www.comreg.ie/industry/radio-spectrum/licensing/search-licence-type/radio-links/>

- Radio, including: *Make and type and receive threshold*;
 - Space Station Name (for satellite earth station (“**SES**”) licences);
 - Space Station Operator (for SES licences);
 - Call signs; and
 - Antenna details including: *Make and type, gain, Polarisation, Azimuth, Beamwidth, Antenna size, height above ground and elevation angle*.
- 1.13 ComReg outlined that publishing the Radio Spectrum Information would help ensure that ComReg meets its obligations under the AIE Regulations the AEI Directive and the relevant Regulations¹⁵ in the European Electronic Communications Code, the (“**EECC**”)¹⁶.
- 1.14 ComReg also observed that the publication of the Radio Spectrum Information would align with ComReg’s “Open by Default” approach to data held by it and would deliver ComReg’s and the Government’s strategic goals^{17 18} to promote enhanced connectivity and support efficient investment.
- 1.15 ComReg noted that:
- the AIE Regulations and the AEI Directive provide legal rights to those seeking to access information on the environment from public authorities; and
 - Crucially, the legislation also requires public authorities to make environmental information available in a progressive manner.
- 1.16 In that regard, the Minister for the Environment, Community and Local Government issued relevant guidelines, the “Guidance for Public Authorities and others on implementation of the Regulations¹⁹” (the “**AIE Guidelines**”). In relation to the statutory obligation in Regulation 5 of the AIE Regulations (transposing Article 7 of the AEI Directive), the AIE Guidelines states (at page 15):

¹⁵ Regulation 98(15) and Regulation 26(1) and Recital 59 of the EECC Regulations.

¹⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L1972>

¹⁷ ComReg Document 23/34 – Electronic Communications Strategy Statement: 2023-2025 – published 13 April 2023. <https://www.comreg.ie/publication/electronic-communications-strategy-statement-2023-2025>

¹⁸ <https://www.gov.ie/en/publication/1a70d-statement-of-strategy-2021-2023/>

¹⁹ <https://assets.gov.ie/40897/4a384c0c760c43bba41ef0d151defa6f.pdf>

*“In general, public authorities shall identify the environmental information they hold and **actively disseminate it to the public, particularly by electronic means.**”* [emphasis added]; and

In addition, the Aarhus Convention, an international agreement that gives people the right to access information about the environment, states in its implementation Guide²⁰, at page 77:

*“Article 5²¹, Requires a system through which public authorities collect environmental information **and actively disseminate it to the public without request.**”* [emphasis added]

Summary of key sections in the Consultation

- 1.17 In section 2.2 of the Consultation, ComReg set out the objectives for this matter, and specifically in paragraph 1.7, refers to the ‘Open by default’ approach to data held by it and to ComReg’s and the Government’s strategic goals to promote enhanced connectivity and support efficient investment.
- 1.18 In section 3 of the Consultation, ComReg set out and assessed eight requirements²² for publishing the Radio Spectrum Information, all of which have regard for ComReg’s obligations²³ as set out in the 2002 Act, the AIE Regulations and AEI Directive (as amended) and the EECC.

²⁰ The Aarhus Convention – An Implementation Guide:

https://unece.org/DAM/env/pp/Publications/Aarhus_Implementation_Guide_interactive_eng.pdf

²¹ Article 5 of the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters <https://unece.org/DAM/env/pp/documents/cep43e.pdf>

²² Access to Information on the Environment, Access to and availability of Information, Efficient Spectrum Management, Ensuring the compliant use of the radio spectrum, Promoting Competition, Efficient investment and innovation, Supporting non-spectrum matters, and Impact on consumers.

²³ See Section 4 “Legal and Regulatory Basis” in the Consultation.

- 1.19 Section 3.2²⁴ of the Consultation assessed the applicability of Regulation 8²⁵ of the AIE Regulations and Regulation 9²⁶ of the AIE Regulations with regard to its proposal to publish Radio Spectrum Information. This is in line with Regulation 5(4) of the AIE Regulations, and included, at paragraphs 3.8 to 3.37 of the Consultation, assessing the applicability of the exceptions set out in Regulations 8 and 9 to ComReg’s proposal, i.e. (a) international relations, national defence or public security, (b) the course of justice (including criminal inquiries and disciplinary inquiries), (c) commercial or industrial confidentiality, where such confidentiality is provided for in national or Community law to protect a legitimate economic interest, (d) intellectual property rights, and (e) personal data.
- 1.20 Legal and regulatory matters were considered in Section 4 of the Consultation document.

Submissions to the Consultation

- 1.21 ComReg invited views from interested parties on the Consultation and gratefully received nine submissions (the ‘**Submissions**’):
- i. Alternative Operators in the Communications Market (“**ALTO**”);
 - ii. An Amateur Station licensee;
 - iii. Eircom Limited (“**Eir**”);
 - iv. enet Telecommunications Networks Limited (“**Enet**”);
 - v. ESB Networks (“**ESBN**”);
 - vi. Global Satellite Operators Association (“**GSOA**”);
 - vii. Irish Radio Transmitter Society (“**IRTS**”);
 - viii. Three Ireland (Hutchison) Limited (“**Three**”); and
 - ix. Viasat.
- 1.22 Non-confidential versions of the Submissions are published in ComReg Document 24/90a. Throughout this Response to Consultation, ComReg has summarised the main views in the Submissions and has carefully considered all before setting out its final position.

²⁴ See paragraphs 3.3 to 3.7 of the Consultation

²⁵ Regulation 8 of the AIE Regulations sets out the grounds that mandate for not publishing certain information.

²⁶ Regulation 9 of the AIE Regulations sets out the discretionary grounds for not publishing certain information.

1.23 Respondents provided views on the following matters:

- (i) The definition of environmental information under Regulation 3(1) of the AIE Regulations;
Security concerns;
Personal data;
Commercial or Industrial Confidentiality;
The scope of information proposed for publication; and
The rationale for the publication of the information.

1.24 Those views can be broadly categorised as (i) comments pertaining to ComReg's specific proposals in relation to the publication of information; and (ii) general comments in relation to the legal basis for ComReg's proposals.

Assessment of submissions and final position

1.25 In Chapter 3 below, ComReg considers and assesses the Respondents' views as follows:

- An overview of the relevant sections of the Consultation;
- A summary of the relevant Submissions;
- ComReg's assessment of the Submissions; and
- ComReg's final position-.

1.26 ComReg's final position can be summarised as follows:

- In Q1 2025, the following Radio Spectrum Information for fixed links and satellite earth stations will be published:
 - ComReg's licence reference number;
 - Licensee Name;
 - Licence Type;
 - Licence commencement and expiry date;
 - Location coordinates of apparatus;
 - Frequency band(s);

- Channel number;
 - Frequency assignment;
 - Frequency bandwidth;
 - EIRP;
 - Space Station Name (for SES licences);
 - Space Station Operator (for SES licences);
 - Amateur Station Call signs; and
 - Antenna details including: *gain, Polarisation, Azimuth, Beamwidth, Antenna size, height above ground and elevation angle.*
- ComReg will not publish (1) Radio: *Make, type, and receive threshold*, (2) Antenna details: *Make and type of equipment*,
 - ComReg intends on publishing Radio Spectrum Information for other licence types, by Q4 2025, and
 - In regard to Amateur Station licences ComReg observes that they may contain personal information which would identify an individual and/or their residential address. Consequently, ComReg will not publish Amateur Station Licensee name and station location unless prior consent has been received from the licensee.

Structure of this Document

The remainder of this document is structured as follows:

Chapter 2: Sets out a summary of the submissions and ComReg's assessment and final position;

Chapter 3: Sets out the next steps following the publication of this Response to Consultation and Decision;

Chapter 4: Sets out ComReg's Decision;

Annex 1: Network information published Enet and ESNB; and

Annex 2: Licence information published by Ofcom

Chapter 2

2 Response to submissions received to Consultation 24/13

Definition of Environmental Information

- 2.1 ComReg noted in paragraph 3.3 of the Consultation that the AIE Regulations, as amended, along with the AEI Directive, provide legal rights to those seeking to access information on the environment from public authorities, who are required to make environmental information available in a progressive manner. Importantly ComReg noted that:

Article 7(1) of the AEI Directive requires Member States to:

“ensure that environmental information progressively becomes available in electronic databases which are easily accessible to the public through public telecommunication networks.”

- 2.2 ComReg further noted that the radio spectrum information held by it relates to information about radio apparatus that emit in various ways: either, or both, non-ionising radiation and energy that are likely to affect the air and atmosphere elements by passing through them, as identified in the definition of “environmental information” contained in Regulation 3(1)²⁷ of the AIE Regulations.

Respondents Views

- 2.3 Two respondents, ALTO and Three, disagree with ComReg’s interpretation of the definition of environmental information as per Regulation 3(1) of the AIE Regulations.
- 2.4 ALTO submits that the information in question must be likely to affect the elements of the environment or human health for it to be defined as environmental information. Therefore, ComReg’s interpretation of the AIE Regulations is at odds with its publication of non-ionizing radiation (“**NIR**”) survey reports.

²⁷ See paragraph 4.3 of the Consultation.

- 2.5 ALTO further submits that ComReg’s interpretation of environmental information means that all information that ComReg “holds on these issues” comes within the AIE Regulations and this would appear to trigger a requirement for ComReg to consider the environmental impacts of decisions to open new frequency bands.
- 2.6 In its response, Three submits that:
- ComReg has not sufficiently set out the basis for its view that the information in question falls under the scope of the AIE Regulations;
 - as laptops, mobile and cordless phones all clearly emit non-ionising radiation using technologies such as Bluetooth, Wi-Fi or 4G. Three submits that the logical extension of ComReg’s preliminary view would mean that information relating to the use of these across the entire public service also constitutes environmental information; and
 - absent a clear and substantiated basis for the finding that NIR emissions from licenced radio equipment used for fixed links affects or is likely to affect the environment, then it is not appropriate to categorise associated information as environmental information.

ComReg’s Assessment

- 2.7 First, ComReg observes that both ALTO and Three incorrectly assume that the ICNIRP²⁸ NIR standards apply solely to fixed link licences. As detailed on ComReg’s website²⁹ and in the published NIR survey reports³⁰, ComReg obliges **all** operators authorised under a Wireless Telegraphy Licence or a General Authorisation³¹, as applicable, to ensure that emissions from their networks do not exceed the public exposure limits established by ICNIRP.
- 2.8 Second, ComReg observes that Electromagnetic Radiation (“**EMR**”) consists of waves of the electromagnetic (“**EM**”) field, which propagate through space and carry momentum and electromagnetic radiant energy. Types of EMR include radio waves, microwaves, infrared, (visible) light, ultraviolet, X-rays, and gamma rays, all of which are part of the EM spectrum.
- 2.9 Third, ComReg observes that the definition of environmental information in Article 3(1) of the AIE Regulations includes any information in written, visual, aural, electronic or any other material form on:

²⁸ International Commission on Non-Ionizing Radiation Protection

²⁹ [Non-Ionising Radiation Information | Commission for Communications Regulation \(comreg.ie\)](https://www.comreg.ie/non-ionising-radiation-information)

³⁰ [NIR Reports | Commission for Communications Regulation \(comreg.ie\)](https://www.comreg.ie/nir-reports)

³¹ [General Authorisation | Commission for Communications Regulation \(comreg.ie\)](https://www.comreg.ie/general-authorisation)

- a) the state of the elements of the environment, **such as air and atmosphere**, water, soil, land, landscape and natural sites including wetlands, coastal and marine areas, biological diversity and its components, including genetically modified organisms and the interaction among these elements, [*emphasis added*]
- b) factors, such as substances, **energy**, noise, **radiation** or waste, including radioactive waste, **emissions**, discharges and other releases into the **environment, affecting or likely to affect the elements of the environment**, [*emphasis added*]
- c) measures (including administrative measures), such as policies, legislation, plans, programmes, environmental agreements, and activities affecting or likely to affect the elements and factors referred to in paragraphs (a) and (b) as well as measures or activities designed to protect those elements.
- 2.10 It is clear from the above that ComReg’s radio spectrum licensing information falls within this definition. ComReg observes that this view is supported by relevant case law, including, for example:

- a) Office of the Commissioner for Environmental Information (“OCEI”) Decision³² in Mr Ken Foxe, Right to Know CLG and An Garda Síochána (published on 31 May 2021): each decision to provide a licence enabling the installation of communication masts on Garda property is a measure or activity within part (c) of the environmental information definition and the OCEI did not find it necessary to consider whether the information also falls within paragraph (b) of the definition. There “*is a real and substantial possibility that the licensing of communication masts will affect the environment as “both radio and mobile phone masts emit radiofrequency electromagnetic fields (EMFs) with a spectrum of 3kHz to 300GHz.....Although there is a lack of good quality data on the specific impact of EMFs on the environment..... EMFs appear to have more or less potentially harmful, non-thermal, biological effects on plants, insects and animals as well as the human body, even when exposed to levels that are below the official threshold values....”*;

³² <https://ocei.ie/en/ombudsman-decision/6c5b6-mr-ken-foxe-right-to-know-clg-and-an-garda-siochana/>

- b) OCEI Decision³³ in Mr Q and ESB Networks Limited (published 9 June 2016): Emissions of heat and magnetism from electrical conductors fall within the description of an emission into the environment for the purposes of Art 10(1) AIE Regulations, as these factors are not contained by the transmission system and are transmitted into the environment;
- c) OCEI Decision³⁴ in Mr Ken Foxe, Raidió Telefís Éireann and the Department of Defence (published 7 June 2016): (i) Information on air travel of Department personnel falls within part (c) of the environmental information definition as information actively affecting or likely to affect the environment since the activity of air travel employs combustion engines which emit carbon dioxide into the air; and (ii) information on dates and destinations of air travel also falls under part (b) of the definition on the basis that it relates to indirect information on emissions;
- d) Two OCEI Decisions in Mr X and Department of Agriculture, Food and the Marine (published on 13 December 2023³⁵ and on 6 March 2023³⁶): Information relating to the Forestry Service Licence Viewer was environmental information because the Forest Service Licence Viewer was an administrative measure likely to affect the environment within part (c) of the definition. The Forestry Service Licence Viewer presents details on a number of relevant licences and that the technical specification for the Forestry Service Licence Viewer directly affects how this information is displayed to the public; and
- e) UK Information Tribunal decision in Ofcom v Information Commission and T-Mobile, Appeal No. EZ/2006/0078³⁷: supports the view that (i) radio wave emissions that pass through the atmosphere from radio equipment to any solid component of the natural world are likely to affect one or more of the elements listed in part (a) of the Environmental Information definition; and (ii) radio wave radiation emanating from radio equipment is an emission for the purposes of part (b) of the Environmental Information definition and the emissions exclusion in Art 10(1) of the AIE Regulations.

³³ <https://ocei.ie/en/ombudsman-decision/98233-mr-q-and-esb-networks-limited/>

³⁴ <https://ocei.ie/en/ombudsman-decision/5dade-mr-ken-foxe-raidio-telefis-eireann-and-the-department-of-defence/>

³⁵ <https://ocei.ie/en/ombudsman-decision/913ba-mr-x-and-department-of-agriculture-food-and-the-marine/>

³⁶ <https://ocei.ie/en/ombudsman-decision/79011-mr-x-and-department-of-agriculture-food-and-the-marine/>

³⁷ <https://informationrights.decisions.tribunals.gov.uk/DBFiles/Decision/i104/Ofcom.pdf>

- 2.11 Regarding the submission by Three that ComReg's proposal would have wider implications for public bodies regarding publishing information on laptops, mobile and cordless phones, etc. ComReg notes that compliance with the AIE Regulations by other public bodies is a matter for themselves. ComReg further notes that the Consultation addressed the Radio Spectrum Information contained within radio spectrum licences and not radio equipment held by ComReg.
- 2.12 Contrary to the submissions of ALTO and Three, the AIE Regulations do not provide an exemption for radio equipment which have emissions which meet or are below the ICNIRP NIR levels. As such compliance, or otherwise, with ICNIRP NIR emission levels does not exempt Radio Spectrum Information from falling within the scope of the AIE Regulations.
- 2.13 Finally, in response to ALTO's submission that ComReg's interpretation of the AIE Regulations would require it to consider the environmental impacts of opening other frequency bands, ComReg observes that Annexes I and II of the Environmental Impact Assessment Directive 2014/52/EU ³⁸ sets out those projects that require an Environmental Impact Assessment to be conducted in order to assess the environmental impacts of a proposed project. ComReg observes that the allocation and assignment of radio frequency spectrum is not identified in Annexes I and II of Directive 214/52/EU and as such there is no obligation on ComReg to consider the environmental impacts of opening additional frequency bands.

ComReg's Final Position

- 2.14 ComReg observes that:
- the legal basis for the AIE Regulations is Directive 2003/4/EC of the European Parliament and of the Council on Public Access to Environmental Information (the AEI Directive) which provides that, subject to certain exceptions, information relating to the environment held by, or for, a public authority must be made available on request **to any person, without that person having to state an interest.** (*emphasis added*), and imposes a positive duty on public authorities to proactively disseminate environmental information without request.

³⁸ [DIRECTIVE 2014/52/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - of 16 April 2014 - amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment - \(europa.eu\)](#)

- The AEI Directive was adopted by the EU to give effect to the Access to Information pillar of the 1998 UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (the Aarhus Convention). Its provisions are designed to align legislation in EU Member States with the Convention. Article 1 of the AEI Directive sets out its core objectives:
 - a) to guarantee the right of access to environmental information held by or for public authorities and to set out the basic terms and conditions of, and practical arrangements for, its exercise, and
 - b) to ensure that, as a matter of course, environmental information is progressively made available and disseminated to the public in order to achieve the widest possible systematic availability and dissemination to the public of environmental information.
- The Aarhus Convention, and, by implication, the AIE Directive – takes as its starting point the premise that people have a right to live in a clean environment and that a comprehensive regime of access to environmental information is one way in which each Member State can vindicate this basic right.

2.15 Therefore, having carefully considered the Respondents' views, the relevant provisions in the AIE Regulations and the AEI Directive, it is evident that the relevant Radio Spectrum Information held by ComReg as set out above in paragraph 1.9 falls within the definition of "environmental information"³⁹ within the AIE Regulations and AEI Directive.

Security concerns

- 2.16 ComReg noted in the Consultation⁴⁰ that it has published the mobile network operators' (MNOs) base station locations and service type on its Siteviewer website since 2004.
- 2.17 ComReg outlined in the Consultation⁴¹ that the publication of certain information it holds for example in respect of An Garda Síochána or the Defence Forces could adversely affect national defence or public security, therefore ComReg proposed not to publish any Radio Spectrum Information which identifies frequency assignments and/or apparatus used by An Garda Síochána or the Irish Defence Forces.

³⁹ Publication of Radio Spectrum Licence Information: <https://www.comreg.ie/publication/publication-of-radio-spectrum-licence-information>

⁴⁰ See paragraph 3.12 of the Consultation.

⁴¹ See paragraph 3.10 of the Consultation.

- 2.18 ComReg further outlined in the Consultation⁴² that the publication of the Radio Spectrum Information for authorised undertakings⁴³ would not adversely affect national security.
- 2.19 ComReg also outlined that it would evaluate any formal requests by Government with regards to the publication or otherwise of certain Radio Spectrum Information in the interest of national security.

Respondents Views

- 2.20 Six respondents, ALTO, ESBN, Enet, Eir, Three and GSOA⁴⁴ submit that ComReg's proposals would give rise to physical and cyber security attacks which may be related to national security.

Physical Security

- 2.21 On the particular matter of physical security ALTO and Eir submit that mobile network equipment has been vandalised in the past for different reasons such as 5G conspiracy theories. Eir submits that such actions are costly for mobile operators and disruptive to the communities served by the infrastructure.
- 2.22 ESBN submits that the publication of the proposed information would increase the risk of physical attacks on its network as it would provide bad actors with all the information required to jam or interfere with its fixed links network.
- 2.23 Three submits that the publication of some fixed link information would allow operator network topology to be derived and potential vulnerabilities to, in effect, be placed into the public domain. Three observes that telecoms operators may provide services to the Gardai, Defence Forces or strategically important infrastructure providers (for example energy generators). In light of this Three submits that there should be a mechanism for licensees to identify specific installations which would also be excluded from publication for justified national security reasons.

⁴² See paragraph 3.11 of the Consultation.

⁴³ "authorised undertaking" means an undertaking deemed to be authorised under Regulation 6 of S.I. No. 444/2022 - European Union (Electronic Communications Code) Regulations 2022.

⁴⁴ Global Satellite Operators Association

- 2.24 Enet submits that ComReg has not given any consideration to current geopolitical tensions in making its deliberations. Enet submits that a number of major suppliers of telecommunications hardware in Ireland are involved, either directly or indirectly, in military conflicts that has evoked strong public reactions in Ireland. Enet contends that it is entirely conceivable that individuals or groups, opposed to the actions of supplier countries involved in such conflicts could make use of “lists” published by ComReg to target sites and damage equipment linked to those countries. To support its submission Enet claims that “100s of attacks” took place in the UK in 2020 on mobile masts hosting 5G equipment as it was believed the equipment was responsible for spreading the coronavirus.
- 2.25 The GSOA submits that it and its members do not, in principle, oppose the making available of spectrum licence information. However, they do consider that certain technical details and system parameters of satellite Earth Station should remain confidential in order to preserve the operational security of satellite networks and to prevent malicious or intentional interference and risk distorting competition to the detriment of existing players.
- 2.26 GSOA notes that, regarding satellite earth station in particular, other the regulatory authorities referenced in the consultation do not publish the same level of details as proposed by ComReg. In particular, The Luxembourg Regulatory Institute in Luxembourg and The Dutch Authority for Digital Infrastructure in The Netherlands, only makes very limited information available to the public.

Cybersecurity

- 2.27 Three considers that ComReg’s proposals to publish the make and type of equipment does not strike the correct balance between the Open Data intent of the proposals and the publication of information which could potentially allow “bad actors” to target specific equipment types for cyber or other attack.
- 2.28 ESBN is of the view that the publication of the proposed information would increase the risk of cyber-attacks on its network.

Security concerns

- 2.29 Enet notes that ComReg has proposed publication exemptions An Garda Síochána and the Defence Forces. Enet submits that the logic underpinning such exemptions would seem to equally apply but has not been proposed to extend to Customs, Aviation, Health, Schools and Emergency service entities all of which Enet supply services to.
- 2.30 ESNB [REDACTED]

ComReg's Assessment

Physical Security

- 2.31 On the matter of physical security, ComReg notes that a number of attacks on telecommunications sites occurred throughout Europe in 2020, many of which were attributed to the false belief that coronavirus was spread by 5G technology. ComReg is aware that a very small number of telecommunication masts have been physically attacked in Ireland since 2020. ComReg notes that these types of physical attacks are rare, sporadic and uncoordinated.
- 2.32 ComReg further notes that it has been publishing mobile site information, including technology services, on its Siteviewer website since 2004, and there is no evidence that this resulted in any coordinated attempt to attack, jam or interfere with the mobile operators' networks during that period. ComReg observes that wireless telegraphy telecommunications equipment is, in the main, deployed on large, purpose built, masts located at high sites such as rooftops or mountain tops and are easily visible to the general public.
- 2.33 Regarding Enet's submission that there have been "100s of attacks" on mobile masts hosting 5G equipment in the UK, ComReg notes that Enet has not provided any evidence to this effect. In relation to the number of attacks on telecommunication equipment and sites, ComReg also notes that the referenced New York Times article⁴⁵ in Enet's submission states:

*"Across Britain, more than **30 acts of arson and vandalism** have taken place against wireless towers and other telecom gear this month, according to police reports and a telecom trade group. In roughly **80 other incidents in the country, telecom technicians have been harassed on the job.**"*

[emphasis added]

and

⁴⁵ <https://www.nytimes.com/2020/04/10/technology/coronavirus-5g-uk.html>

*“The companies said that in many cases, vandals had **damaged existing infrastructure and not new 5G gear.**” [emphasis added]*

- 2.34 ComReg notes that Enet has not provided any evidence that any of the attacks it references were as a direct result of the radio licence information published by Ofcom on its Spectrum information portal⁴⁶ since 2009.⁴⁷
- 2.35 Furthermore, ComReg is not aware of any reports of damage to telecommunications sites either in Ireland or Europe caused by individuals or groups, opposed to the actions of telecommunications equipment suppliers involved in military conflicts.
- 2.36 ComReg notes that respondents have not provided any evidence to support their views that ComReg’s proposals would jeopardise the physical security of telecommunications infrastructure thereby increasing the likelihood of physical attacks on same.
- 2.37 Interestingly, ComReg notes that both Enet and ESNB publish on their websites maps showing the location of wireless backhaul assets (Enet)⁴⁸ and 3-phase substation locations (ESNB)⁴⁹, examples of which are set out in figures 1 to 6 in annex 1 to this document.
- 2.38 Enet’s backhaul coverage map enables users to zoom in and out and see the precise location of its fixed links. While the Enet map does not show geographic coordinates, ComReg observes that it is possible to identify the exact location of the relevant installation.
- 2.39 ComReg further notes that the information published by ESNB itself provides information on technical limitations of its infrastructure and provides hierarchical intricacies of the Irish interconnected system at the customer, sub-distribution, distribution and transmission levels.

⁴⁶ <https://www.ofcom.org.uk/spectrum/frequencies/spectrum-information-portal/>

⁴⁷ <https://www.ofcom.org.uk/spectrum/radio-equipment/nondisclosure/>

⁴⁸ <https://www.enet.ie/coverage/>

⁴⁹ <https://www.esbnetworks.ie/new-connections/generator-connections-group/availability-capacity-map>

- 2.40 In addition to the information published by Enet and ESBN themselves, ComReg observes that detailed information on fixed links licences granted by Ofcom to Enet⁵⁰ and Northern Ireland Electricity Networks Limited (“NIE Networks”) (a subsidiary of ESB Group)⁵¹ is available on Ofcom’s Spectrum information portal. Figures 7, 8, and 9 in annex 2 of this document provides screenshots of the fixed links licence information published by Ofcom on its Spectrum Information Portal for E-Nasc Eireann Teoranta⁵², NIE Networks, and Mobile Broadband Network Limited⁵³.
- 2.41 ComReg is not aware that Enet or NIE Networks (part of ESB Group) have suffered any physical security incident as a direct result of the information being made publicly available by Ofcom, nor has either respondent referred to any actual physical attacks arising from publication of same.
- 2.42 The Ofcom portal also details information in respect of circa 207 satellite earth station licences. ComReg observes that the information fields which Ofcom publishes for the fixed links licences granted, such as those issued to Enet and NIE Networks and for satellites earth stations (see figure 10 in annex 2) is broadly similar to those proposed by ComReg⁵⁴. Table 4 in annex 2 of this document lists the licence information published by Ofcom compared ComReg’s proposal in the Consultation.
- 2.43 Further to the radio licence information published by Ofcom on its Spectrum Information Portal, ComReg notes that tables 5, 6 and 7 in annex 2 sets out the information Ofcom’s publishes when consulting on NGSO⁵⁵ SES licences.⁵⁶

⁵⁰ 38 fixed links licences granted to E-Nasc Eireann Teoranta are available to view on [Spectrum information portal - Ofcom](#) as of 16 September 2024.

⁵¹ 25 fixed link licences granted to Northern Ireland electricity Networks Limited are available to view on [Spectrum information portal - Ofcom](#) as of 16 September 2024.

⁵² Enet is a registered business name of enasc eireann teoranta – <https://www.enet.ie/about-us/>

⁵³ Mobile Broadband Network Limited was formed in 2007 and is a network sharing venture between [EE](#) and [Three \(UK\)](#) – <https://mbnl.co.uk/history/>

⁵⁴ Ofcom’s spectrum information portal data file for its Wireless Telegraphy Register (CSV) <https://static.ofcom.org.uk/static/radiolicensing/html/register/WTR.csv>

⁵⁵ Non-geostationary orbit

⁵⁶ For example: Starlink Internet Services Limited – applications for six non-geostationary orbit earth station (gateway) licences – 21 June 2022 – <https://www.ofcom.org.uk/spectrum/space-and-satellites/starlink-gateway-licence-applications/>

- 2.44 Notwithstanding the above, ComReg observes that in 2020 the Electronic Communications Security Measures (“**ECSMs**”) working group was established to design a set of security requirements for the electronic communications sector. The working group was co-chaired by the National Cyber Security Centre (“**NCSC**”)⁵⁷ and ComReg. The group also included members from providers of electronic communications networks and services. This group developed a series of documents known as the Electronic Communications Security Measures or ECSMs. In total, ten ECSMs have been drafted.
- 2.45 In particular ECSM 003⁵⁸ relates to physical and environmental security. ComReg does not repeat the detail of ECSM 003 in this document and readers are referred to ECSM 003. In summary ECN/S⁵⁹ providers should ensure that installations are not accessible to the general public where feasible, and are protected from burglary or vandalism, by installing effective physical security defences.

National security

- 2.46 ComReg observes Regulation 9 of the AIE Regulation states:

“(1) A public authority may refuse to make available environmental information where disclosure of the information requested would adversely affect— (a) international relations, national defence or public security,”

- 2.47 ComReg observes that the AIE Regulations do not provide definitions of “international relations”, “national Defence” or “public security”. However, the AIE Guidelines provides the following guidance⁶⁰:

*“... environmental information affecting international relations or national defence ... **would include any restricted information or documents received from other States or international organisations**. Information damaging to public security may also be withheld, **e.g. information about explosives or firearms storage or manufacture**.” [emphasis added]*

- 2.48 ComReg notes that the Radio Spectrum Information it holds does not contain information as described in the above guidance.

⁵⁷ [NCSC: National Cyber Security Centre](#)

⁵⁸ www.gov.ie/pdf/?file=https://assets.gov.ie/205225/f6c13f58-4f48-4078-8982-2f9cc74a029a.pdf#page=null

⁵⁹ Electronic Communication Networks/Services

⁶⁰ Guidance for Public Authorities and others on implementation of the AIE Regulations – <https://www.gov.ie/pdf/?file=https://assets.gov.ie/76998/4d6c5e83-b377-493e-92c6-c76de9d2e0d8.pdf>

- 2.49 It is unclear to ComReg how Customs, Aviation, Health, Schools and Emergency services could be considered to be matters of national defence or public security. ComReg notes that Enet has not provided any evidence to support its view that these types of entities should be considered exempt on the same basis as the Defence Forces and An Garda Síochána.
- 2.50 ComReg further observes that in respect of its NIR survey reports it does not publish any information in relation to those sites where there is apparatus in use by Defence Forces⁶¹ or An Garda Síochána. As such its proposal to not to publish environmental information in relation to any radio spectrum licences granted to An Garda Síochána is entirely consistent with that approach. Indeed, ComReg observes that in 2020 the Office of the Information Commissioner (“OIC”) upheld, on appeal, ComReg’s decision to not disclose information in relation to An Garda Síochána’s use of the Tetra network that was subject to an Freedom of Information (“FOI”) request⁶².

Cybersecurity

- 2.51 In respect of concerns raised regarding the increased likelihood for cyberattacks arising from ComReg’s proposals, ComReg notes that cyberattacks target, for example, computer information systems, computer networks, and personal computer devices. A cyberattack seeks access to data, functions, or operating systems for malicious purposes. ComReg further notes that knowledge of the location of radio apparatus is generally not required to conduct a cyberattack as the majority of cyberattacks originate over the internet from remote locations.
- 2.52 Following on from the Network and Information Systems 1 (‘NIS1’) Directive⁶³, the Network and Information Systems 2 (‘NIS2’)⁶⁴ Directive is the EU-wide legislation on cybersecurity. This is a separate piece of legislation, and it provides legal measures to boost the overall level of cybersecurity in the EU. The NIS2 directive is intended to help organisations improve their resilience against cyberattacks. Notably, NIS2 places a key focus on securing critical infrastructure and reducing supply chain risks stemming from third party vendors.

⁶¹ Under the Wireless Telegraphy Act, 1926 the Defence Forces are exempt from requiring a licence to own and operate wireless telegraphy apparatus, ComReg coordinates the Defence Force use of spectrum in frequency bands where, for example undertakings have fixed links licences.

⁶² [OIC - Ms X and Commission for Communications Regulation](#)

⁶³ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L1148>

⁶⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02022L2555-20221227&qid=1718292238734>

- 2.53 ComReg notes that Article 40 of the EECR requires that providers of public electronic communications networks and/or services take appropriate and proportionate technical and organisational measures – to appropriately manage the risks posed to the security of their networks and services. In particular, measures including encryption, where appropriate, shall be taken to prevent and minimise the impact of security incidents on users and on other networks and services.

ComReg's Final Position

- 2.54 ComReg notes that respondents have not provided any supporting material or clear evidence to support their views that publishing Radio Spectrum Information would increase physical, cyber or national security threats.
- 2.55 However, ComReg will evaluate any formal requests by Government with regards to the non-disclosure of certain radio spectrum information in the interest of defence, national and/or public security. Requests would need to include detailed evidence in relation to specific site information rather than blanket requests for non-disclosure of multiple sites or for a specific licensee.
- 2.56 ComReg notes that the AIE Guidelines make clear that public authorities should start from a position of a presumption in favour of disclosure of environmental information, and that any decision to not disclose environmental information on the basis of the exemptions in Regulations 8 and/or 9 of the AIE Regulations is subject to a “public interest” test. Therefore, if ComReg were to receive an AIE request for Radio Spectrum Information which has not been proactively published by ComReg, it would have to demonstrate why it is in the public interest not to disclose that information.
- 2.57 If ComReg were unable to satisfactorily demonstrate that it was not in the public interest to release the requested information, then ComReg would have to make the information available. Therefore, ComReg's position is that any request by Government to not proactively publish specific Radio Spectrum Information will also have to set out in detail why it is in the public interest not to do so.

Radio Spectrum Information proposed for publication

- 2.58 In the Consultation (document 24/13) ComReg proposed to publish the following categories of Radio Spectrum Information:
- Technical information;
 - Radio spectrum assignments; and

- Location information.

2.59 In the Consultation ComReg assessed each of the categories above and made the following points:

- (i) **Technical Information** - ComReg noted that technical information on the operation of radio spectrum networks is not commercially confidential as all radio networks need to meet a minimum network availability to ensure optimum service delivery i.e. the degree to which the network is operable and not in a state of failure or outage at any point of time. ComReg also noted that the equipment deployed by Licensees is non-proprietary, commercially available, and must comply with the European Union (Radio Equipment) Regulations of 2017, as amended.

ComReg set out in the Consultation, its view that the publication of technical information would not be injurious to a Licensee (or advantageous to the Licensee's competitors or others) as the information is already publicly available in some form. ComReg further notes that the make and model of radio equipment used by Licensees does not relate to the procurement and service contracts that Licensees have with their equipment suppliers, therefore no commercial confidentiality exists.

- (ii) **Radio spectrum assignments** - ComReg set out its view that information on radio spectrum assignments is relevant information concerning rights of use. ComReg publishes information on the frequency bands available for licensing in its Radio Frequency Plan for Ireland⁶⁵ and in the relevant licence type documents⁶⁶. Therefore, ComReg, as outlined in the Consultation is of the view that the publication of the spectrum assignments for other licence types would be no different in effect as it would not reveal any confidential commercial matters.
- (iii) **Location Information** - ComReg noted in the Consultation that while a commercial customer may be assumed from the geographic location of apparatus, a Licensee's competitors may be able to determine a Licensee's customers from general market research such as telephoning or emailing potential clients. Therefore, geographical location of apparatus is not commercially confidential as it does not identify a commercial end-user.

⁶⁵ <https://www.comreg.ie/industry/radio-spectrum/radio-frequency-plan-for-ireland/>

⁶⁶ <https://www.comreg.ie/industry/radio-spectrum/licensing/search-licence-type/>

- 2.60 ComReg observed in the Consultation that as part of the recent fixed links⁶⁷ and satellite earth station⁶⁸ consultations, it has indicated its intention to publish Radio Spectrum Information in respect of all licence types, including fixed links and satellite earth stations on its Siteviewer website.
- 2.61 ComReg noted in those consultations that the publication of Radio Spectrum Information would not only assist ComReg in meeting its objectives of promoting competition between undertakings and ensuring the efficient use of spectrum, for example it would also assist in the sharing and compatibility process for new and existing licensees and reduce the risk of harmful interference between services such as fixed links and satellite services.
- 2.62 In addition, the publication of Radio Spectrum Information would also be in line with ComReg's 'Open by Default' approach to data, ensuring that data collected as part of its regulatory duties should be considered for publication as Open Data in line with Ireland's Open Data Strategy 2017 – 2022 for the benefit of all interested parties.
- 2.63 ComReg noted that respondents to those consultations agreed that the publication of Radio Spectrum Information would promote transparency, facilitate efficient network planning, coordination, coexistence, and deployment for service providers.
- 2.64 It was in this context that as part of the Mobile Phone and Broadband Taskforce's Work Programme for 2022, ComReg committed to making fixed links information publicly available via the Siteviewer resource, to provide greater overall transparency to relevant stakeholders regarding services deployed in certain areas. ComReg is not aware of any industry members of the Mobile Phone and Broadband Taskforce (some of whom are respondents to this Consultation) objecting to this work item.

Respondents Views

- 2.65 The views of respondents regarding the proposed Radio Spectrum Information to be published are summarised and then assessed by ComReg under the following headings.

- location and equipment information;

⁶⁷ ComReg Documents 20/109, 21/134, 22/93, and 23/61 – https://www.comreg.ie/publications?date_from=&date_to=&orderby=date_desc&limit=10&query=Review+of+the+Fixed+Radio+Links&category=&type=&start-month=&start-year=&end-month=&end-year=

⁶⁸ ComReg Documents 21/135, 22/56, 23/32, and 23/96 – https://www.comreg.ie/publications?date_from=&date_to=&orderby=date_desc&limit=10&query=Review+of+the+Satellite+Earth+Station&category=&type=&start-month=&start-year=&end-month=&end-year=

- dissemination of environmental information by other EU Countries;
- personal data; and
- the WLA/WCA consultation.

Location and equipment information

- 2.66 Four respondents, Enet, GSOA, Three and Viasat, submit comments on the specific information proposed for publication by ComReg.
- 2.67 GSOA proposes that the following information should not be made publicly available: Location coordinates of apparatus and stations, frequency assignments, bandwidth channel number, output power, space station name, operator, radio make and type, antenna details including gain, polarisation, azimuth, size, elevation angle etc.
- 2.68 Viasat welcomes ComReg's proposal to publish certain licence information but recommends that ComReg carefully evaluate whether publication of information with respect to a given licensing parameter is necessary to achieve the Consultation goals before that parameter is included in any public database. Viasat notes that ComReg proposes making available the radio make, type and the receiver threshold. But, as pointed out by ComReg itself, the receiver threshold is very specific to a given level of the wanted signal received for a given bit error rate and is therefore not relevant for the usage the public and industry would make of the database.
- 2.69 Three submits that the make and model information should not be published. This, in Three's view, would be in line with the Electronic Communications Committee's⁶⁹ ("ECC") recommended list of parameters to be published which does not include equipment make and type.
- 2.70 Enet submits that location and equipment information should not be published for the following reasons:
- (i) It would enable competitors to identify the location of its wireless broadband customers;
 - (ii) The disclosure of equipment information would enable competitors to determine its product offerings; and
 - (iii) It could result in it breaching confidentiality agreements it has in place with its customers.

⁶⁹ <https://cept.org/ecc/groups/ecc/client/introduction>

- 2.71 Enet submits that ComReg has failed to provide sufficient justification for publishing location and equipment information which it considers to be confidential. Enet further submits that in relying on Article 7(2) of the AEI Directive to justify the publication of the locations of purchasers of point-to-point fixed wireless leased lines, ComReg is moving materially away from what this section of the Directive seeks to cover. Enet further submits that under Directive 97/66 EC⁷⁰ its customers fall under the definition of “users”⁷¹ and are entitled to claims of confidentiality depending on their circumstances.
- 2.72 Enet contends that it would not be in a position to identify what reasons they might have for claiming confidentiality, and do not currently have permission from any of its customers to publish some of the information ComReg has indicated it plans to publish. In this regard Enet opines that ComReg must ensure that operators cannot be in breach of obligations it has to third parties in relation to confidentiality.
- 2.73 To support its view Enet references ComReg’s consultation⁷² and final Decision 24/07⁷³, on “Wholesale Local Access (WLA) provided at a fixed location and Wholesale Central Access (WCA) provided at a fixed location for mass-market products market review” wherein ComReg decided to not publish generic information in relation to the presence of competitor networks on the basis that *“it seeks to strike a balance between transparency and protecting commercially sensitive information”*.
- 2.74 Consequently, Enet submits that if ComReg is to maintain its current proposal as outlined in Consultation 24/13 then it must reconcile this with how it considers it reasonable to withhold very high-level location information from publication on the basis of commercial sensitivity on the one hand, while not regarding publication of detailed granular information on customer locations as being commercially sensitive on the other.
- 2.75 Enet opines that, as acknowledged by ComReg at paragraph 3.25 of the Consultation, it is obliged to apply the tests laid down by law and as set out in its guidelines on the treatment of confidential information. In this regard Enet is of the view that ComReg has not appropriately applied those tests. In particular Enet submits that:

⁷⁰ [Directive - 97/66 - EN - EUR-Lex \(europa.eu\)](#)

⁷¹ “any natural person using a publicly available telecommunications service, for private or business purposes”.

⁷² ComReg Document – 23/03 Consultation and Draft Decision – Market Reviews - Wholesale Local Access (WLA) provided at a fixed location and Wholesale Central Access (WCA) provided at a fixed location for mass-market products. <https://www.comreg.ie/media/2024/01/ComReg2407.pdf>

⁷³ [Market Reviews Wholesale Local Access \(WLA\) provided at a fixed location Wholesale Central Access \(WCA\) provided at a fixed location for mass-market products NON-CONFIDENTIAL Response to Consultation and Final Decision | Commission for Communications Regulation \(comreg.ie\)](#)

- (i) ComReg is treating a vast array of data/information, including on customer locations/equipment as exempt from being subject to these tests going forward and so not treating confidentiality claims on a case-by-case basis;
 - (ii) ComReg is speculating as to the basis that might generically be claimed for confidentiality and is summarily dismissing these on an ex-ante basis in a manner that means it never has to consider the four criteria again in relation to specific cases where the information in question is concerned;
 - (iii) in all cases publishing the location information of its customer sites and their point-to-point wireless coordinates, which Enet claims have a sunk cost, would be both injurious to Enet and advantageous to its competitors. Enet claims this is a sincerely held belief and simply cannot be objectively dismissed on the basis that it promotes competition as ComReg suggests;
 - (iv) the guidelines on confidentiality are specifically designed so that the competitive advantage of non-SMP operators are not diluted. In this regard promotion of competition is served by not publishing such confidential information rather than publishing it; and
 - (v) ComReg must consider the “beliefs” of the parties claiming confidentiality and that ComReg cannot reasonably argue that Enet should not harbour legitimate concerns about access to its customer location information (and equipment being used) vis-à-vis its competitors ability to target and cherry-pick those customers in terms of offers. Enet further submits that ComReg cannot suggest this is not a reasonable concern (belief) and/or that it is one that can be trumped on the basis of ComReg’s objective of promoting competition.
- 2.76 Enet is further of the view that no binding regulatory decision, such as the one proposed by ComReg regarding the publication of Radio Spectrum Information ought to fetter any operator or their customers rights to claim confidentiality in relation to customer locations or other information that may be relevant on a case-by-case basis.

2.77 Finally, Enet submits that ComReg's proposal is inconsistent with approaches elsewhere in the EU and are contrary to the other EU and Irish legislation and guidance. Enet adds that: "ComReg notes that several "European NRAs" already make spectrum licence information publicly available "to varying degrees"". ComReg has not indicated whether any of these "varying degrees" equates to the level of granularity of publication being proposed by ComReg. Enet further notes that 2 of the 3 countries listed in paragraph 2.12 in the Consultation are not in the EU (Switzerland and the UK), while from a review of the 3 EU countries referenced in the Appendix (Spain, Finland and Luxembourg) none appear to have engaged in the level of disclosure being proposed by ComReg.

ComReg's Assessment

- 2.78 ComReg observes that the submission by the GSOA that the publication of certain technical information would compromise the security of the earth station is at odds with submissions received as part of the recent review of the satellite earth station licensing⁷⁴. Satellite industry respondents to that consultation were supportive of this position stating that it would enable site location identification, potential sharing and compatibility issues with both fixed satellite and fixed link users thereby speeding up the application process and minimising the potential for harmful interference for all parties.
- 2.79 Indeed, ComReg observes that recently, satellite operator Starlink notified Italy's Business Ministry that the Italian mobile network operator Telecom Italia (TIM) is refusing to share information it needs about TIM's use of spectrum⁷⁵. Starlink contend that it needed the information to avoid causing spectrum interference to existing services. Being deprived of it has "severely" slowed the deployment of new gateway equipment, the company claimed.
- 2.80 In respect to the specific technical and radio spectrum information to be published, ComReg has published guidelines documents in respect of all its different radio spectrum licences. While the information in the guidelines varies in respect of the particular licence type it includes information on frequencies available for licensing, maximum power and bandwidth.

⁷⁴ ComReg Document 21/135 : Review of the Satellite Earth Station Licensing Scheme
https://www.comreg.ie/publications?date_from=&date_to=&orderby=date_desc&limit=10&query=21%2F135&category=&type=&start-month=&start-year=&end-month=&end-year=

⁷⁵ [SpaceX complains to Italian government over spectrum data sharing - PolicyTracker: spectrum management news, research and training](#)

- 2.81 In relation to fixed links specifically, ComReg observes that its fixed links licensing guidelines document⁷⁶ sets out in detail the technical parameters associated with each of the various allocated frequency bands which are in turn based on the associated CEPT band plans⁷⁷. This information includes, frequency, bandwidth, channel number and minimum transmission capacity. This is the information required by ComReg to enable it to conduct a full technical assessment to ensure that all radio spectrum users can coexist.
- 2.82 ComReg does not agree with Enet that it has incorrectly applied the confidentiality tests to its radio spectrum licensing information. It has clearly set out its detailed assessment under all the relevant confidentiality tests in Chapter 3 of the Consultation.
- 2.83 Finally, ComReg remains of the view, as outlined in paragraph 3.40 of the Consultation, that access to radio spectrum licence information for ECN/S would assist them in making informed decisions on the efficient planning and deployment of electronic communication networks and/or services.

Location information

- 2.84 Enet's claims that it does not have permission from its customers to publish "*some of the information proposed ComReg has indicated it plans to publish*". Notwithstanding that Enet fails to specify precisely what that information is, it is unclear to ComReg why the publication of X/Y coordinates would require the customer to give permission to Enet to permit ComReg to publish.
- 2.85 In relation Enet's submission that the publication of X/Y coordinates has the potential to identify customers ComReg makes the following observations:
- X/Y coordinates pinpoint a location on a map anywhere in the world and in and of themselves are not confidential as they are the building blocks of any mapping system. They can be expressed in Eastings/Northings or Latitude/Longitude. Thus X/Y coordinates are not unique to ComReg licensees;
 - all radio spectrum licences are issued on a technology and service neutral basis. ComReg does not collect any customer information as part any radio spectrum licensing process. Rather ComReg gathers transmit and receive site locations and the associated apparatus and technical operating conditions at those sites as part of its licensing process;

⁷⁶ [ComReg Document 23/112 – Fixed Radio Links Licensing Guidelines – published 4 December 2023](#)

⁷⁷ ECC Report 173 – Fixed Service in Europe Current use and future trends post 2022 – <https://docdb.cept.org/download/4472>

- fixed links are installed outdoors and at high sites so that the signal can transmit uninterrupted over large distances and as such are visible to anyone in the vicinity of the installation as well as on mapping tools such as Google maps;
 - the majority of its more than 16,000 fixed links are co-located at the same site, be that at the top of a building in an urban or suburban location or a standalone telecommunications mast. As such the same X/Y coordinates will apply to multiple different operators with installations co-located at that particular site; and
 - The various different use cases for fixed links, (backhaul, broadcasting links, wireless broadband) means that there is no direct correlation between the location of equipment at a particular location and the provision of a service to a third party at that location.
- 2.86 Consequently, it would only be possible to determine that Enet had radio equipment at a particular location, but not conclusively determine the nature of any service or the third party that may be receiving a service at that location, as is currently the case with the wireless information published by Enet on its website <https://www.enet.ie/coverage/>.

Equipment information

- 2.87 In relation to Enet's submission that the disclosure of equipment information would enable competitors to discern the nature the product it is providing to its customers, ComReg observes that all applicants for fixed links are required to register equipment (antenna (including make and model), feeders and radio transmitters). This information is published on the searchable equipment database on ComReg's website⁷⁸ and as such is already in the public domain. However, ComReg observes that the database does not attribute the equipment type to licensees and as such it is not possible to identify what equipment is used by any operators at any location.
- 2.88 Furthermore, ComReg observes that in relation to mobile base station location information currently published both on Siteviewer and on the ComReg website, equipment make and model is not published.
- 2.89 Based on the above, ComReg is mindful that it should apply a consistent approach to the publication of information and therefore, on balance, it will not publish information regarding the make and model of radio equipment.

⁷⁸ [Equipment Database | Commission for Communications Regulation \(comreg.ie\)](https://www.comreg.ie/Equipment-Database)

- 2.90 Finally, the receive threshold of a radio indicates the level of the wanted signal received for a given bit error rate, and this information is relevant to network planning and interference analysis. The receive threshold does not directly relate to radio emissions and radiation, however that information will inform a network planner's decision-making process when determining an appropriate EIRP for a network link. Therefore, ComReg will not publish the receive threshold information.

Dissemination of environmental information by other EU Countries

- 2.91 Firstly, ComReg notes it has no discretion in relation to the obligations imposed on it by the AEI Directive (as set out in Article 7) "*Member States shall ensure that environmental information progressively becomes available in electronic databases which are easily accessible to the public through public telecommunication networks*".
- 2.92 Further, Regulation 5 of the AIE Regulations obliges ComReg to "*make all reasonable efforts to maintain environmental information held by or for it in a form or manner that is readily reproducible and accessible by information technology or by other electronic means.*"
- 2.93 In that regard, ComReg disagrees with Enet and the GSOA, that its proposals are inconsistent with approaches elsewhere. In paragraph 3.8 of the Consultation, ComReg notes that the ECC and the International Telecommunication Union⁷⁹ ("ITU") actively encourage administrations to make radio spectrum information publicly available in the interests of transparency and coordinated use of shared spectrum.
- 2.94 ComReg does not agree with Enet's submission that ComReg's proposal to publish Radio Spectrum Information is inconsistent with approaches by regulatory authorities elsewhere in the EU and contrary to other EU and Irish legislation and guidance. In this regard ComReg notes that Enet did not provide specific examples of the claimed inconsistencies. In contrast ComReg has set out in the consultation and again in this document the radio spectrum information proposed for publication and its alignment with the relevant legislation and the approach taken by other relevant regulatory authorities. Notwithstanding, ComReg notes that the implementation of Article 7(1) of the AEI Directive by each Member State, and assessing the compliance of such, is a matter for the European Commission.
- 2.95 ComReg's reference to publication of radio spectrum information by other regulatory authorities within the Consultation was to provide an example of what has been published by those bodies.

⁷⁹ <https://www.itu.int/en/Pages/default.aspx>

2.96 Regarding Enet's observation that Switzerland and the UK are not EU Member States, ComReg notes that:

- Ofcom's decision to publish the information it holds on radio spectrum information was taken when it was a member of the European Union to comply with the AEI Directive. ComReg notes that the UK's Environmental Information Regulations 2004⁸⁰ states that:

"4.—(1) Subject to paragraph (3), a public authority shall in respect of environmental information that it holds—

(a) progressively make the information available to the public by electronic means which are easily accessible; and

(b) take reasonable steps to organize the information relevant to its functions with a view to the active and systematic dissemination to the public of the information."

- Switzerland's Federal Data Protection and Information Commissioner sets out that:

*"the freedom of information regarding environmental matters under the Aarhus Convention is expressly set out in the Swiss Environmental Protection Act, which also defines environmental information. The Environmental Protection Act refers to the Freedom of Information Act with regard to the right of access to official documents containing environmental information held by federal authorities."*⁸¹

and

- Switzerland's Federal Office for the Environment provides further information on the Aarhus Convention and its application within Swiss law and how members of the public can access environmental information.⁸²

2.97 Outside of Europe, ComReg notes that the FCC in the US and the Australian Communications and Media Authority also publish detailed satellite earth station information as open data and has a search system to access information on International Communications Filing Systems for satellites and satellite earth stations. Table 1 lists the information fields the FCC publishes for Protected FSS Earth Station.⁸³

⁸⁰ <https://www.legislation.gov.uk/ukxi/2004/3391/contents>

⁸¹ https://www.edoeb.admin.ch/edoeb/en/home/oeffentlichkeitsprinzip/oe_bund.html

⁸² <https://www.bafu.admin.ch/bafu/en/home/topics/law/info-specialists/aarhus-convention.html>

⁸³ FCC websites where SES licence and international filing information is published:

2.98 The FCC also provides granular search interfaces into more than 40 FCC opendata databases such as radio call signs and equipment authorisation at <https://www.fcc.gov/licensing-databases/search-fcc-databases>.

Table 1 Protected FSS Earth Station licence information published by the FCC

| | | |
|--------------------------------|---------------------------------------|---|
| Registration Number | Earth Station Longitude Decimal | Earth Station Height AGL (meters) |
| Location Status | Lower Frequency (MHz) | Earth Station Height AMSL (meters) |
| Licensee Name | Upper Frequency (MHz) | GSO Satellite Longitude Decimal Degrees (+E,-W) |
| Call Sign | Pointing Azimuth (degrees) | Use for Tracking, Telemetry and Command |
| Earth Station Latitude DMS | Pointing Elevation Angle (degrees) | Certification Date |
| Earth Station Longitude DMS | Antenna Gain (dBi) | Registration Last Updated |
| Earth Station Latitude Decimal | Earth Station Site Elevation (meters) | Call Sign Last Updated |

2.99 ComReg further notes that the Australian Communications and Media Authority also publishes radio spectrum for 88 types of radio licences including satellite earth station licence⁸⁴ and fixed links licence⁸⁵ information on its website⁸⁶ the details of which is set out in Tables 2 and 3.

Table 2 Satellite Earth Stations licence information published by the Australian Communications and Media Authority

| | | |
|----------------------|----------------------|--------------------|
| Customer ID | Licensee address | Licence number |
| Licensee | Licence service | Callsign |
| Trading name | Licence subservice | Date of issue |
| Date of effect | Date of expiry | Site ID |
| Site address | Co-ordinates (GDA94) | Assigned frequency |
| Bandwidth | Freq. assign. ID | Transmitter power |
| EIRP | Emission designator | Antenna ID |
| Antenna polarisation | Antenna azimuth | Antenna type |

- <https://opendata.fcc.gov/Wireless/Protected-FSS-Earth-Station-Registration-Complete-/acbv-jbb4/data>;
- https://fjallfoss.fcc.gov/General_Menu_Reports/license_search.cfm?accessible=NO&wild_select=on ; and
- <https://fcc.report/IBFS/Filing-List/SES>

⁸⁴ Earth - Fixed Earth – https://web.acma.gov.au/rrl/browse_licences.licence_list?pSV_ID=9&pSS_ID=900, Earth Mobile Earth – https://web.acma.gov.au/rrl/browse_licences.licence_list?pSV_ID=9&pSS_ID=901, and Earth Receive – https://web.acma.gov.au/rrl/browse_licences.licence_list?pSV_ID=109&pSS_ID=950

⁸⁵ https://web.acma.gov.au/rrl/browse_licences.licence_list?pSV_ID=2&pSS_ID=203

⁸⁶ https://web.acma.gov.au/rrl/browse_licences.cat_listing

Table 3 Fixed links licence information published by the Australian Communications and Media Authority

| | | |
|----------------------|----------------------|----------------------------|
| Customer ID | Licensee address | Licence number |
| Licensee | Licence service | Callsign |
| Trading name | Licence subservice | Date of issue |
| Date of effect | Date of expiry | Site ID |
| Site address | Co-ordinates (GDA94) | Assigned TX/RX frequencies |
| Bandwidth | Freq. assign. ID | Transmitter power |
| EIRP | Emission designator | Antenna ID |
| Antenna polarisation | Antenna azimuth | Antenna height |
| Antenna type | | |

2.100 Given the above information ComReg’s proposal to publish Radio Spectrum Information is consistent with approaches elsewhere in the Europe (and internationally), in accordance with EU and Irish legislation and guidance.

Personal Data

2.101 Three Respondents submitted comments related to personal data, namely, Enet, the IRTS and an individual Amateur Station Licensee (“**Individual Respondent**”).

2.102 The IRTS welcomes the decision to make data available and agrees with the information as outlined at paragraphs 3.21 to 3.23 of the Consultation. The IRTS also welcomes the decision to make data available in relation to the current list of licensed Amateur radio stations, adding that this would be of immense benefit to the amateur radio community in Ireland, enabling a stronger community and the future growth of the hobby.

2.103 The Individual Respondent fully supports the publication of non-personal data, such as a database of active callsigns, adding that this would be useful to identify pirate operation and Automatic Stations such as repeaters.

2.104 The Individual Respondent is also fully supportive of the publication of the names of Amateur Station Licensees on the basis that this is only done with the consent of the licensee. Regarding the publication of Amateur Station Licensee names, the Individual Respondent provides two examples where a licensee may want to withhold publication of their name:

- (i) Transgender amateur station licensees being dead-named and/or harassed; and
- (ii) Protection of licensees under the age of 18.

2.105 However, the Individual Respondent is not supportive of the publication of the location of Amateur Stations and submits that:

- (i) where the station and residential address do not match, the amateur will still be personally identifiable from the station address; and
- (ii) many amateurs never operate from their station address.

2.106 Additionally, the Individual Respondent notes that Amateur Station licensees from other countries are permitted to operate in Ireland for up to three months and this would result in an incomplete list of all such stations in the country.

2.107 The Individual Respondent concludes by suggesting that ComReg publishes the contact details (such as postal or email address) of licensees on a consent basis. Adding that this would serve the same function as the former Callbook which was, until 2018, published by the Irish Radio Transmitters Society and would be welcomed by the amateur community.

ComReg's Assessment

2.108 Firstly, ComReg notes that it has not proposed to publish any personal data.

2.109 ComReg welcomes the views from the IRTS and agrees that the publication of the list of licensed Amateur radio stations would be of immense benefit to the amateur radio community in Ireland, enabling a stronger community and the future growth of the hobby.

2.110 ComReg notes that the Individual Respondent's view that the publication of location of Amateur Stations serves little purpose. However, ComReg disagrees and takes the opportunity to remind the Respondent that ComReg's proposals serve to meet the objectives of Article 1 of the AEI Directive:

(a) to guarantee the right of access to environmental information held by or for public authorities and to set out the basic terms and conditions of, and practical arrangements for, its exercise, and

(b) to ensure that, as a matter of course, environmental information is progressively made available and disseminated to the public in order to achieve the widest possible systematic availability and dissemination to the public of environmental information.

2.111 ComReg notes that further to Regulation 5(1)(b) of the AIE Regulations, ComReg, as a public authority, "*shall make all reasonable efforts to maintain environmental information held by or for it in a manner that is readily reproducible and accessible by information technology or by other electronic means*".

- 2.112 ComReg further notes Article 7 of the AIE Directive, which provides inter alia that: “*Member States shall take the necessary measures to ensure that public authorities organise the environmental information which is relevant to their functions and which is held by or for them, with a view to its active and systematic dissemination to the public, in particular by means of computer telecommunication and/or electronic technology, where available*”.
- 2.113 Additionally, the publication of Radio Spectrum Information also aligns with ComReg’s “Open by Default” approach to data held by it and would deliver ComReg’s and the Government’s strategic goals^{87 88} to promote enhanced connectivity and support efficient investment. It should be noted that in accordance with relevant ministerial policy directions given under section 13 of the Communications Regulation Act, 2002⁸⁹, as amended (the “**2002 Act**”), ComReg’s spectrum management objective⁹⁰ is to ensure the efficient management and use of the radio spectrum.
- 2.114 ComReg observes that, in line with Regulation 5(4) and Regulation 8(a)(i) of the AIE Regulations, it should not proactively disseminate information that would among other harms, “*adversely affect the confidentiality of personal information relating to a natural person who has not consented to the disclosure of the information...*”. In addition, ComReg has specific obligations regarding the protection of personal data under the General Data Protection Regulation.⁹¹
- 2.115 As such and as clearly stated in the Consultation the publication of Amateur Station Licensee’s name and the station address would only be done *after* the consent of the licensee has been obtained.
- 2.116 Regarding the Individual Respondent’s submission that many amateur station licensees never operate from the station address on their licence, ComReg notes that:
- (i) Regulation 4(1) of S.I. 192 of 2009⁹² states that 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 Apparatus at a location or locations as specified in Part 2 of the Licence.*” Therefore, amateur station licences

⁸⁷ ComReg Document 23/34 – Electronic Communications Strategy Statement: 2023-2025 – published 13 April 2023. <https://www.comreg.ie/publication/electronic-communications-strategy-statement-2023-2025>

⁸⁸ <https://www.gov.ie/en/publication/1a70d-statement-of-strategy-2021-2023/>

⁸⁹ [Communications Regulation Act, 2002, Section 13 \(irishstatutebook.ie\)](https://www.irishstatutebook.ie/eli/2002/si/13/made/en/html)

⁹⁰ Further to section 12(1)(b) of the Communications Regulation Act 2002, as amended.

⁹¹ <https://www.comreg.ie/about/foi-aie-info/data-protection/>

⁹² <https://www.irishstatutebook.ie/eli/2009/si/192/made/en/print#>

are required to notify ComReg of any potential changes to the station address on their licence;

- (ii) Callsigns are not assigned to the person, they are assigned to the station in line with Article 19 of the ITU's Radio Regulations, therefore amateur station licensees are required to operate from the location of the amateur station as specified on the licence;⁹³ and
- (iii) Amateur station licensee can operate on a mobile basis however the station call sign must be suffixed with "/M" or "/MM" in case of maritime mobile operation,

2.117 Regarding the Individual Respondent's view that amateur station licensees visiting from other countries can be granted a temporary visitor amateur station licence thereby resulting in an incomplete list of all such stations in the country, ComReg notes that this is incorrect. Applicants for a temporary visitor amateur station licence are required to provide, and update as required, an address for where they intend to operate their amateur station. Therefore, the issuing of temporary visitor amateur station licences does not result in incomplete information of the Amateur Stations licensed by ComReg.

2.118 Finally, ComReg notes that there are online amateur station databases such as <https://www.qrzcg.com/> and <https://www.qrz.com/> where amateur station licensees can, and do, publish this type of information themselves.

WLA/WCA consultation

2.119 ComReg notes that Enet is incorrect in its assertion that ComReg's guidelines on the treatment of confidential information⁹⁴ are specifically designed so that the competitive advantage of non-SMP operators are not diluted. In fact, the guidelines explain how ComReg will treat claims by respondents that information supplied to it, for example in the course of a consultation process, is confidential.

⁹³ <https://www.itu.int/pub/R-REG-RR>

⁹⁴ ComReg Document 05/24 – Response to Consultation – Guidelines on the treatment of confidential information – published 22 March 2005.

- 2.120 In response to Enet's reference to the WLA/WCA consultation, ComReg observes that a direct comparison between the two consultations cannot be made. The purpose of the WLA/WCA consultation was to assess the competitiveness of the broadband market whereby a number of different factors are considered as part of a market review; supply and demand, avoidance of anti-competitive or dominant behaviour by service providers, in order to protect the consumer. The specific information that Enet references, is the redaction of a table in D05/24, which set out the precise FTTP⁹⁵ network overlaps which measured the number of premises across various combinations of networks.
- 2.121 However, in this particular circumstance sharing the precise FTTP network overlap locations of multiple broadband service providers in the broadband markets would reveal the commercial nature of the service being provided. As noted above the proposed Radio Spectrum Information to be published would not reveal any information regarding the commercial nature of a service being provided. Therefore, the reasons for sharing one set of data and not sharing another set of data are distinct and uncontradictory and serve different regulatory requirements.

ComReg's Final Position

- 2.122 For the avoidance of doubt, ComReg is proposing to publish the technical parameters associated with apparatus for wireless telegraphy as licensed by ComReg. It is ComReg's view that publishing the information will not result in Operators, being in breach of any Third-party obligations that it may have regarding its customers personal or other information. The information that ComReg plans to publish will relate to the Operator's services; information about the customers using those services will not be published.

Rationale for publication

- 2.123 In Chapter 4 of the Consultation, ComReg outlined the legal and regulatory reasons for publishing the Radio Spectrum Information. This is not repeated here and readers are referred to the original material where ComReg sets out the basis for its proposals. In summary the proposals would enable ComReg to:
- (i) Meet the objectives of, and its obligations under, the AEI Directive and AIE Regulations;
 - (ii) Improve the efficiency of radio spectrum management;
 - (iii) Ensure the compliant use of the radio spectrum;
 - (iv) Promote competition;

⁹⁵ Fibre to the Premises.

- (v) Implement the obligations of the EECC, EC and CEPT Decisions;
- (vi) Assist non-spectrum related planning processes
- (vii) Fulfil the objectives of the Open Data Directive⁹⁶ as transposed in the State.

Respondents Views

- 2.124 Enet and eir provided views on ComReg's rationale for publishing Radio Spectrum Information.
- 2.125 Enet contends that ComReg's proposals to publish confidential information "en masse" amounts to an attempt to circumvent an administrative burden that places a legal obligation on it to assess whether or not information should be made available to requesters in accordance with the AIE Regulations. Enet is of the view that the proposal is not in line with the application then assessment model which is inherent in the AIE Regulations.
- 2.126 Enet asserts that ComReg does not attempt to tie back much of the legislation cited in the consultation with the specific information it proposes to publish. Rather, it has merely taken a "*scattergun approach*" to the various pieces of legislation to justify its proposals.
- 2.127 Enet argues that it is incumbent on ComReg, in accordance with its transparency obligations generally to consult, to clearly explain why e.g. it has cited Art. 7 (2) of the AIE Directive and whether or not it is relying on this specific legislation as the basis for its proposal.
- 2.128 Enet notes that ComReg's reliance on a 21-year-old EC Directive and 17-year-old Regulations as the primary basis for justifying the scale of the changes is in and of itself peculiar and raises legitimate concerns about what is the driver behind this apparent damascene conversion in relation to how this legislation should be interpreted decades after it has been enacted.
- 2.129 Eir does not agree that the reasons outlined in the Consultation justify the publication of information. Eir submits that the information that ComReg proposes to publish is meaningless to the average individual and will only serve to allow criminal individuals to target important sites. To the extent that the AIE Regulations are relevant ComReg's ongoing programme to measure non-ionising radiation better serves to inform citizens of the nature of emissions.

⁹⁶ Directive EU2019/1024 of the European Parliament and of the Council of 20 June 2019 on Open Data & and the re-use of Public Sector Information (PSI).

ComReg's Assessment

- 2.130 Contrary to Enet's contention that ComReg is seeking to circumvent an administrative burden by publishing information "en masse" ComReg is, in fact, seeking to meet the administrative obligations arising from its duty to proactively disseminate environmental information imposed on it by the AIE Regulations. In addition, it will enable ComReg to meet its wider obligations, as set out in the Consultation, such as the Governments "Open by Default" approach to data as well as its objectives in relation to the efficient and effective use of the radio spectrum and the promotion of competition. ComReg is acting in accordance with its transparency obligations generally to consult via this public consultation process itself. In that regard, ComReg has set out its assessment of the Radio Spectrum Information it holds and its rationale for its proposed publication.
- 2.131 ComReg disagrees with Enet's assertion that it is moving away from what Article 7(2) of the AEI Directive seeks to cover and this interpretation places no limitations as to what could be construed as publishable under this provision. ComReg has, in fact, looked at *all* the provisions of the AEI Directive and AIE Regulations in the round and carried out a full assessment in relation to the information proposed for publication.
- 2.132 First, as required by the legislation ComReg has carried out an assessment to determine whether or not the radio spectrum licence information held by it falls within the definition of "environmental information". As set out in section 2.1 above ComReg's radio spectrum information clearly falls within that definition.
- 2.133 Second, in accordance with Article 4 of the AEI Directive and Regulation 5(4) of the AIE Regulations, ComReg has assessed what exceptions should apply to the information falling within the definition of "environmental information". In this regard ComReg has considered the exemptions that would apply to the publication of radio spectrum information it holds. In particular Article 4 (2)(f), which is transposed by Regulation 8(a)(i) of the AIE Regulations, seeks to protect;
- "the confidentiality of personal data and/or files relating to a natural person where that person has not consented to the disclosure of the information to the public, where such confidentiality is provided for by national or Community law";*
- 2.134 As stated, in paragraph 2.108 above ComReg is not proposing to publish any *"personal data and/or files relating to a natural person where that person has not consented to the disclosure of the information to the public"*.

- 2.135 Third, Eir is referred to paragraph 4.11 of the Consultation where ComReg noted that the following statutory provisions are particularly relevant to the Consultation, namely the Open Data and Re-use of Public Sector information Directive (EU) 2019/1024. It mandates the release of public sector data in free and open formats. The overall objective of Directive (EU) 2019/1024 is to continue the strengthening of the EU's data economy by increasing the amount of public sector data available for re-use, ensuring fair competition and easy access public sector information, and enhancing cross-border innovation based on data. Additionally, ComReg refers to the other relevant ComReg functions and objectives discussed above in this Response to Consultation, and notes the relevance of section 10(1)(da) of the Act of 2002, Regulation 98(15) of the EEC Regulations, and Regulation 26(1) of the EEC Regulations.
- 2.136 While Eir may consider this information to be meaningless to most people that does not exempt it from publication. Indeed, ComReg observes that It has received 7 AIE requests for various types of information since 2020. In addition to AIE requests ComReg receives circa 20 requests annually for information on radio spectrum licensees in specific areas from windfarm construction companies seeking to coordinate the development and planning of new windfarms⁹⁷.
- 2.137 ComReg notes that this publication also aligns with ComReg's "Open by Default" approach to data held by it and would deliver ComReg's and the Government's strategic goals^{98,99} to promote enhanced connectivity and support efficient investment.
- 2.138 ComReg agrees with Enet that it has been subject to the AIE Regulations since their adoption into law in 2007¹⁰⁰. In this regard ComReg has always responded to AIE requests for information in relation to radio spectrum licences as and when they arise and will continue to do so. However, the improvements ComReg has made to its licensing database enable it to make Radio Spectrum Information more readily available and easily accessible to interested parties in accordance with all the relevant obligations. While this may lead to a consequent reduction in AIE requests and thereby reduce ComReg's administrative burden this is not the goal of ComReg's proposals.

⁹⁷ [Community-Toolkit-Planning-Process.pdf](#)

⁹⁸ ComReg Document 23/34 – Electronic Communications Strategy Statement: 2023-2025 – published 13 April 2023. <https://www.comreg.ie/publication/electronic-communications-strategy-statement-2023-2025>

⁹⁹ <https://www.gov.ie/en/publication/1a70d-statement-of-strategy-2021-2023/>

¹⁰⁰ Repealing the previous legislation, the European Communities (Access to Information on the Environment) Regulations 1998. S.I. 662 of 2011, S.I. 615 of 2014 and S.I. 309 of 2018 revised these regulations further.

ComReg's Final Position

- 2.139 ComReg's final position is that the publication of radio spectrum information will assist ComReg in meeting its statutory obligation to ensure that environmental information progressively becomes available as set out in the AIE Regulations and the AEI Directive, and its other relevant obligations such as ComReg's "Open by Default" approach to data held by it and ComReg's and the Government's strategic goals^{101 102} to promote enhanced connectivity and support efficient investment.
- 2.140 ComReg is satisfied that this final position is in accordance with relevant legal obligations, and that ComReg's interpretation of the AEI Directive and AIE Regulations is reasonable and proportionate.

¹⁰¹ ComReg Document 23/34 – Electronic Communications Strategy Statement: 2023-2025 – published 13 April 2023. <https://www.comreg.ie/publication/electronic-communications-strategy-statement-2023-2025>

¹⁰² <https://www.gov.ie/en/publication/1a70d-statement-of-strategy-2021-2023/>

Other Matters submitted as part of Consultation 24/13

Inter-Operator Interference Analysis

- 2.141 Viasat and GSOA submit that it is the regulator's responsibility to make sure that stations coexist and that there are interference-free operations and overall efficient use of the spectrum. Viasat submits that regulators should conduct an independent assessment of NGSO-GSO coexistence as part of the application process and proposes a number of additional fixed link parameters that ComReg should include as part of any information publication.
- 2.142 GSOA express the view that regulators play a key role in managing interference and the efficient use of radio spectrum to ensure that stations can coexist. In the regard the regulators should conduct its own coordination between existing and planned networks and that operators should only be called upon when there is a conflict and a risk of interference.

ComReg's assessment

- 2.143 ComReg thanks Viasat for its comments regarding assessing NGSO-GSO coexistence. However, ComReg observes that this matter was consulted on as part of the recently concluded review of ComReg's SES licensing regime¹⁰³. That consultation sought the views of interested parties on various aspects of SES licensing which included NGSO-GSO coexistence. ComReg notes that Viasat did not engage with that consultation process.
- 2.144 In respect of the additional parameters proposed for publication by Viasat, ComReg observes that it does not gather "operating radius" or "beam null depth" information from fixed link applicants as these parameters are not required by ComReg in order to do its technical analysis for these licence types. Fixed links operate as a narrow beam transmitting from one point to another and as such do not operate radially. Additionally, as fixed link applicants are using standard antenna patterns, ComReg does not need to collect beam null depth information as part of its licensing assessment.

¹⁰³ [Review of the Satellite Earth Station Licensing Regime: Response to Consultation and Decision | Commission for Communications Regulation \(comreg.ie\)](#)

- 2.145 Notwithstanding, and as set out in that consultation process, ComReg conducts a full technical assessment of all applications for satellite earth station and fixed link licences to ensure that all operators can coexist. ComReg is not proposing to make any changes to this process. However as set out in that consultation and this Consultation (Document 24/13), ComReg is of the view the publication of Radio Spectrum Information will greatly assist all applicants in preparing their licence applications and provide for a more efficient licensing process for all parties concerned.
- 2.146 ComReg agrees with GSOA that it is the responsibility of the regulator in ensure that services can co-exist, and that the regulator has a key role to play in the management of reports of harmful interference. ComReg is not proposing to make any changes to its current practices and procedures in that regard¹⁰⁴.

¹⁰⁴ [Radio Interference | Commission for Communications Regulation \(comreg.ie\)](https://www.comreg.ie)

Chapter 3

3 ComReg's Final Position and Next Steps

3.1 Having carefully considered and assessed the Submissions, ComReg will publish in Q1 2025 the following Radio Spectrum Information for fixed links and satellite earth stations:

- ComReg's licence reference number;
- Licensee Name;
- Licence Type;
- Licence commencement and expiry date;
- Location coordinates of apparatus;
- Frequency band(s);
- Channel number;
- Frequency assignment;
- Frequency bandwidth;
- EIRP;
- Space Station Name (for SES licences);
- Space Station Operator (for SES licences);
- Amateur Station Call signs; and
- Antenna details including: *gain, Polarisation, Azimuth, Beamwidth, Antenna size, height above ground and elevation angle.*

3.2 ComReg will not publish (1) Radio: *Make, type, and receive threshold*, (2) Antenna details: *Make and type*, of equipment.

3.3 ComReg intends on publishing Radio Spectrum Information for other licence types, by Q4 2025,

- 3.4 In regard to Amateur Station licences ComReg observes that they may contain personal information which would identify an individual and/or their residential address. Consequently, ComReg will not publish Amateur Station Licensee name and station location unless prior consent has been received from the licensee.

Chapter 4

4 Decision Instrument

- 4.1 This chapter sets out ComReg’s final decision document based on the views expressed by ComReg in the preceding chapters and their supporting annexes.

Decision

Decision Instrument for Spectrum Information Response to Consultation – D23/24.

Part I – Definitions and Interpretation

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

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

“**2022 Regulations**” means the European Union (Electronic Communications Code) Regulations 2022 (S.I. No. 444 of 2022);

“**2023 Act**” means the Communications Regulation and Digital Hub Agency (Amendment) Act 2023;

“**Commission**” or “**ComReg**” means the Commission for Communications Regulation, established under section 6 of the Communications Regulation Act 2002, as amended;

“**Siteviewer service**” means an interactive map of Ireland maintained by ComReg on its website, containing, amongst other things, the following information: the location of every mobile network base station; the operator which owns or controls each mobile network base station; and the types of wireless communication standards provided at those locations.

Terms used in this Decision Instrument have the same meanings as set out in any of the following as applicable: the 2002 Act; the 2022 Regulations; the 2023 Act; and this Decision Instrument.

Part II – Legal Basis

This Decision Instrument is made by ComReg:

- a) having had regard to its powers, functions, objectives and duties, including, without limitation, those specifically listed below;

- b) pursuant to its function under section 10(1)(b) of the 2002 Act to manage the radio frequency spectrum, in accordance with a direction under section 13;
- c) pursuant to its objective under Section 12(1)(b) of the 2002 Act to ensure the effective and efficient use of the radio spectrum resource in accordance with any Ministerial Policy Directions given under section 13 of the 2002 Act;
- d) pursuant to its function under section 10(1)(da) of the Act of 2002 for the purpose of contributing to an open and competitive market and also for statistical purposes, to collect, compile, extract, disseminate and publish information from undertakings relating to the provision of electronic communications services, electronic communications networks and associated facilities and the transmission of such services on those networks;
- e) pursuant to its obligation under Article 5(1) of the AIE Regulations to make all reasonable efforts to maintain environmental information held by or for it in a manner that is readily reproducible and accessible by information technology or by other electronic means;
- f) having, pursuant to section 13 of the 2002 Act, complied with the following Policy Directions contained in the February 2003 Ministerial Policy Direction: Policy Direction 5 – Policy Direction only where necessary; Policy Direction 6 – Policy Direction on Regulatory Impact Assessment; Policy Direction 7 – Policy Direction on consistency with other Member States;
- g) Pursuant to ComReg’s obligation under Regulation 98(15) of the ECC Regulations which provides that: “The Regulator and other competent authorities shall, subject to the protection of the confidentiality of any information which they consider to be confidential and the protection of personal data, publish from time to time such information as would, in the opinion of the Regulator or the other competent authority, contribute to an open and competitive market”.
- h) Pursuant to ComReg’s obligation under Regulation 26(1) of the ECC Regulations which requires ComReg to: “ensure that all relevant information on rights, conditions, procedures, charges, fees and decisions concerning general authorisations, rights of use and rights to install facilities is published and kept up to date in an appropriate manner in order to provide easy access to that information for all interested parties.”

- i) having regard to section 12(2)(a) of the 2002 Act which requires ComReg to take all reasonable measures which are aimed at the promotion of competition;
- j) having regard to EU Member States' obligations under Article 7(1) of the AEI Directive to: "take the necessary measures to ensure that public authorities organise the environmental information which is relevant to their functions and which is held by or for them, with a view to its active and systematic dissemination to the public, in particular by means of computer telecommunication and/or electronic technology, where available", and to "ensure that environmental information progressively becomes available in electronic databases which are easily accessible to the public through public telecommunication networks";
- k) having regard to Guidelines which public authorities are obliged to take account of in performing their functions under the AIE Regulations provide that: "Public authorities are reminded that the objective of the Regulations is to facilitate access to environmental information to the greatest possible extent, consistent with the provisions of the Regulations generally";
- l) having regard to Article 5 of European Commission Decision 676/2002/EC on a regulatory framework for radio spectrum policy in the European Community ("Radio Spectrum Decision") provides that: "Member States shall ensure that their national radio frequency allocation table and information on rights, conditions, procedures, charges and fees concerning the use of radio spectrum, shall be published if relevant in order to meet the aim set out in Article 1. Member States shall keep this information up to date and shall take measures to develop appropriate databases in order to make such information available to the public, where applicable in accordance with the relevant harmonisation measures taken under Article 4";
- m) Having regard to the Open Data and re-use of Public Sector information Directive (EU) 2019/1024 as transposed into Irish law by SI 376/2021 (the European Union (Open Data and Re-use of Public Sector Information) Regulations 2021);
- n) having given all interested parties the opportunity to express their views and make their submissions in relation to Consultation 24/13 entitled "Publication of Radio Spectrum information" and considered such representations, as set out in the Response to Consultation and this Decision Instrument; and

- o) for the reasons set out in its written Response to Consultation document (response to Consultation 24/23) to which this Decision is attached.

Part III – Scope and Application

The Decisions below apply to the Siteviewer service on ComReg’s website.

Part IV - The Decision

ComReg hereby makes the following decision: (1) The following information from each radio spectrum licence will be added to the Siteviewer service: ComReg’s licence reference number; Licensee Name; Licence Type; Licence commencement and expiry date; Location of apparatus and stations in decimal degrees; Frequency band; Channel number; Frequency assignment; Frequency bandwidth; Output power; Radio receive threshold; Space Station Name (for SES licences); Space Station Operator (for SES licences); Call signs (where applicable); and Antenna details including: gain; Polarisation; Azimuth; Beamwidth; Antenna size; height above ground; and elevation angle. In regard to Amateur Station licences ComReg observes that they may contain personal information which would identify an individual and/or their residential address. Consequently, ComReg will not publish Amateur Station Licensee name and station location unless prior consent has been received from the licensee.

Part V – Effective Date

The Decision above shall apply from the date of the publication of this Decision Instrument.

Part VI – Maintenance of Obligations

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.

Part VII – Statutory Powers Not Affected

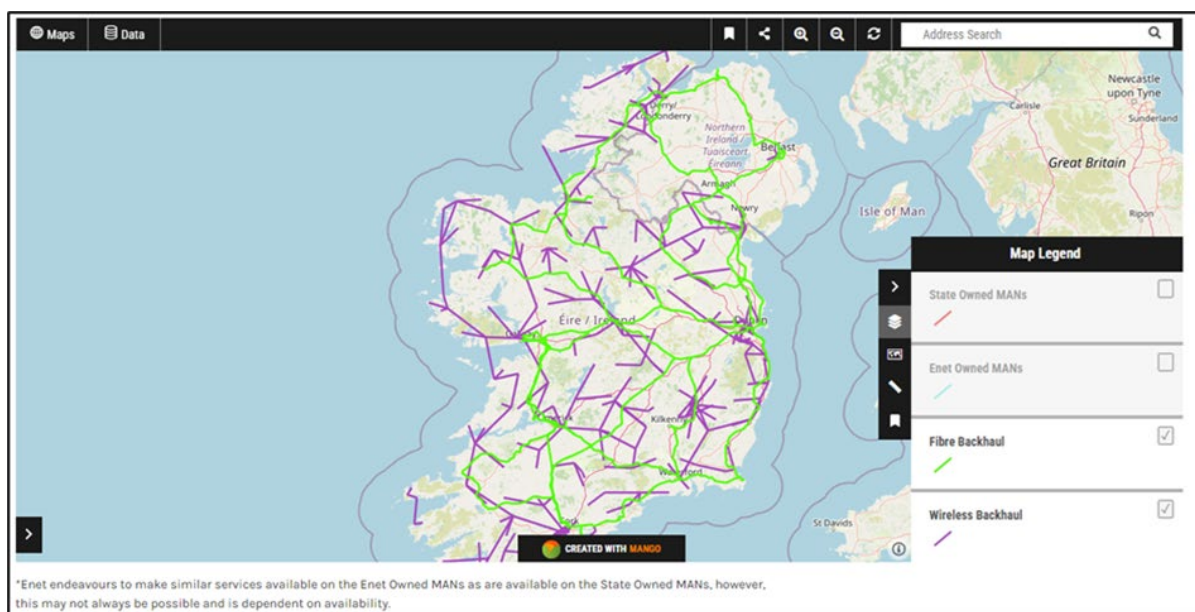
Nothing in this Decision Instrument shall operate to limit ComReg in the exercise of its discretions or powers, or the performance of its functions or duties, or the attainment of objectives under any laws applicable to ComReg from time to time.

ROBERT MOURIK
COMMISSIONER,
THE COMMISSION FOR COMMUNICATIONS REGULATION
The 14th day of November 2024

Annex: 1 Network information published Enet and ESNB

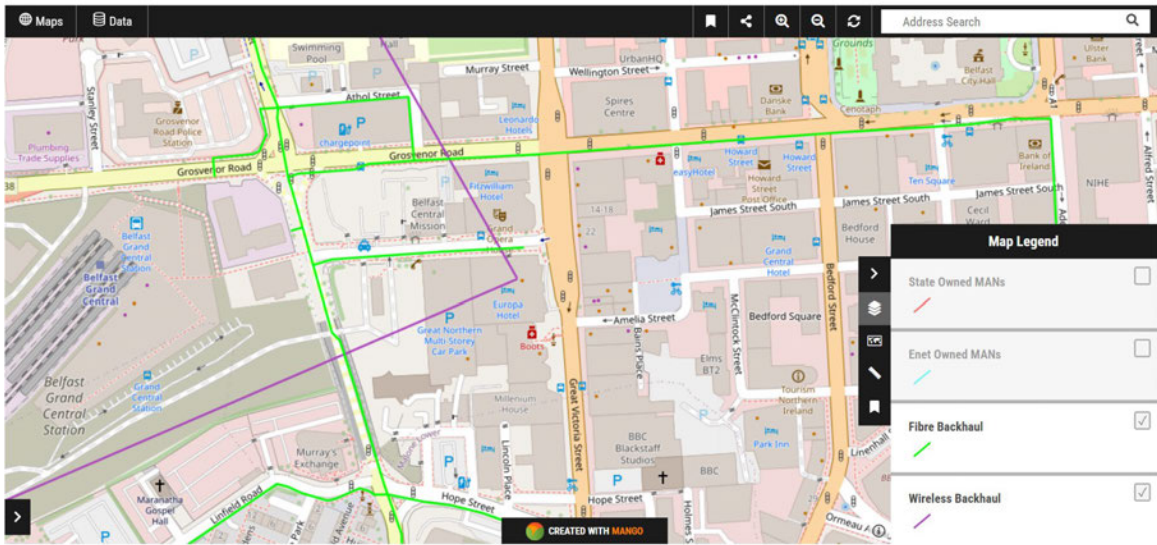
A 1.1 The following figures and tables demonstrate that Enet and ESNB publish information about their coverage, equipment locations and other information related to their network which is, in ComReg's view not dissimilar to publishing the relevant information suggested in this Consultation.

Figure 1 Enet's Interactive Coverage Map¹⁰⁵ – locations of fibre and wireless backhaul



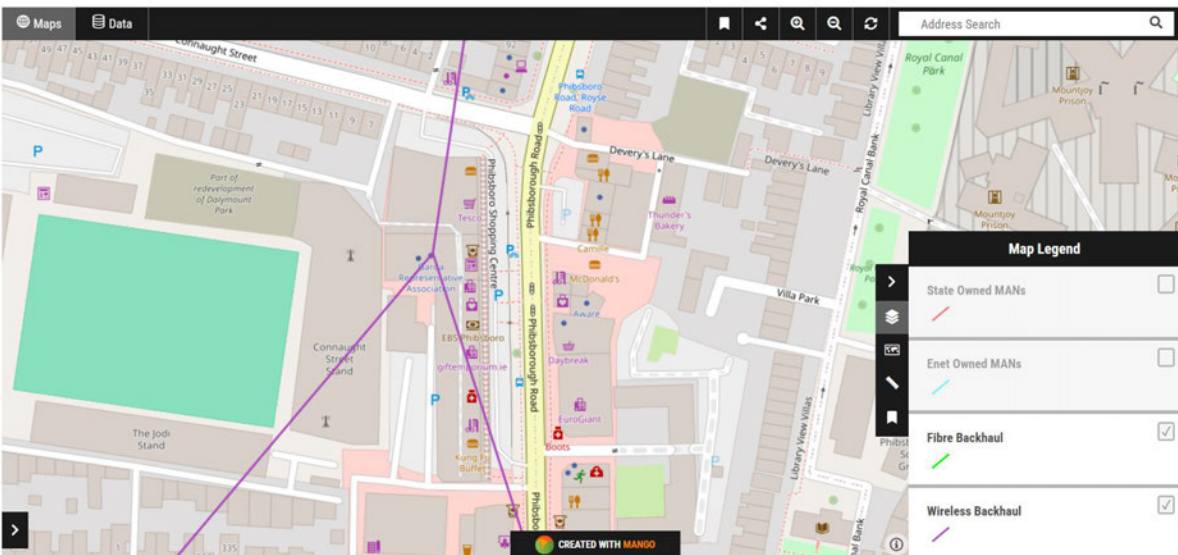
¹⁰⁵ <https://www.enet.ie/coverage/>

Figure 2 Enet’s Interactive Coverage Map – fibre and wireless backhaul locations, example 1



*Enet endeavours to make similar services available on the Enet Owned MANs as are available on the State Owned MANs, however, this may not always be possible and is dependent on availability.

Figure 3 Enet’s Interactive Coverage Map – fibre and wireless backhaul locations, example 2



*Enet endeavours to make similar services available on the Enet Owned MANs as are available on the State Owned MANs, however, this may not always be possible and is dependent on availability.

Figure 4 Screenshot of ESNB's Capacity Map

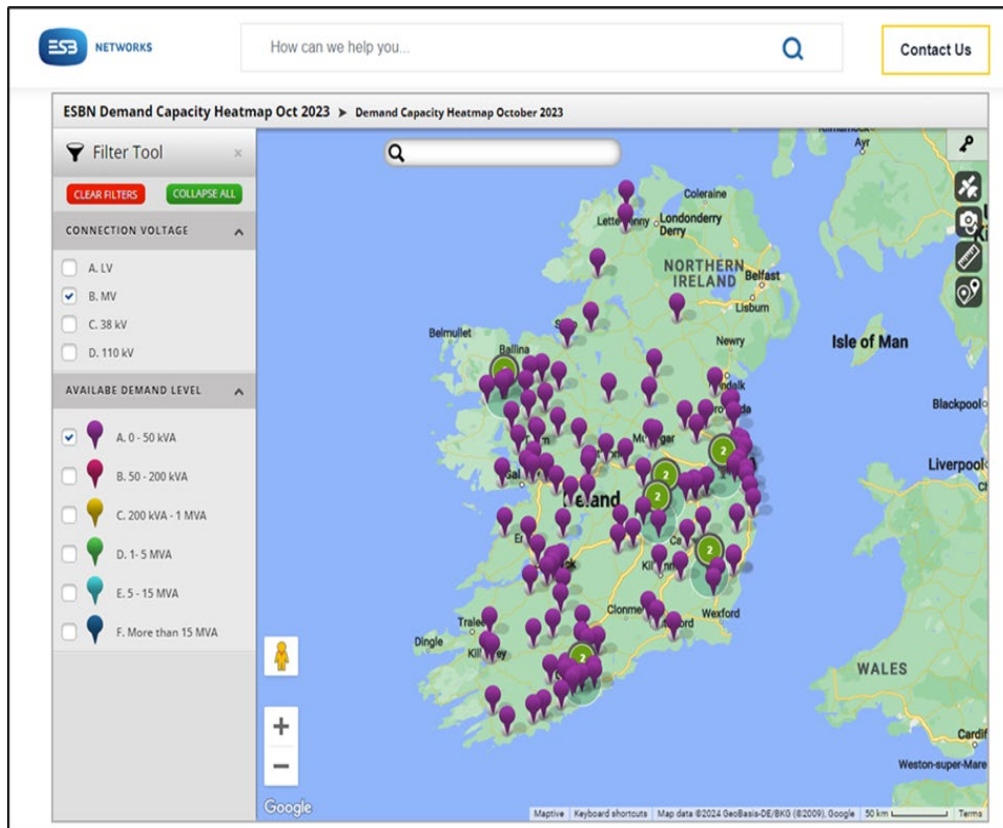
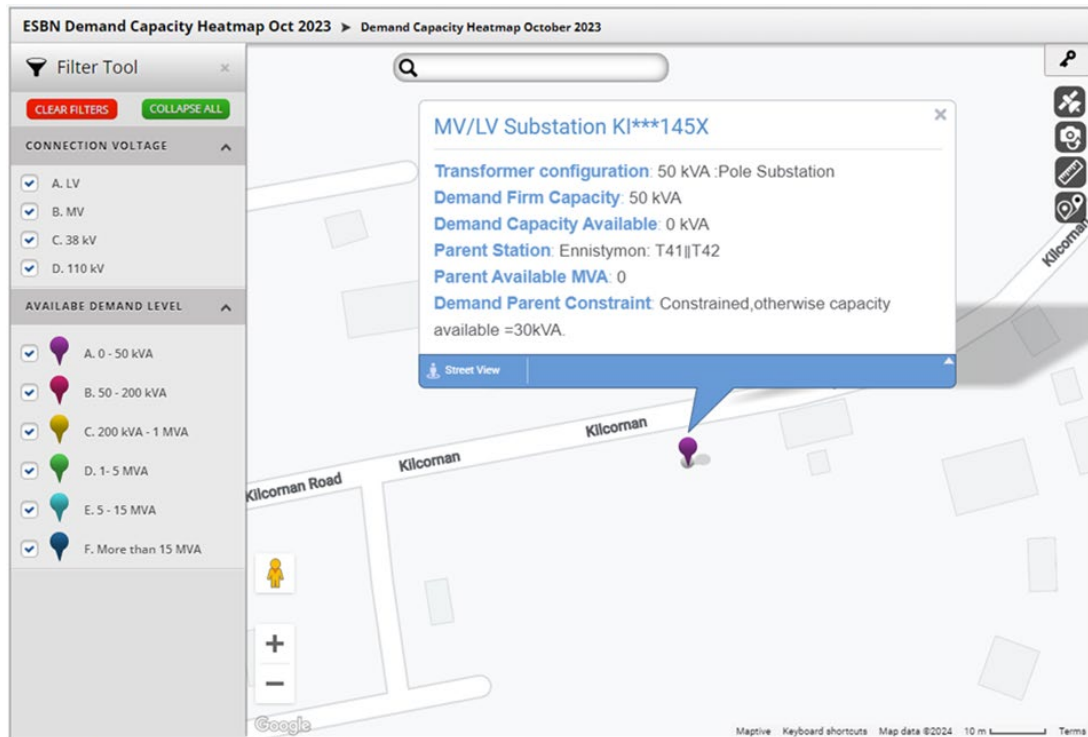
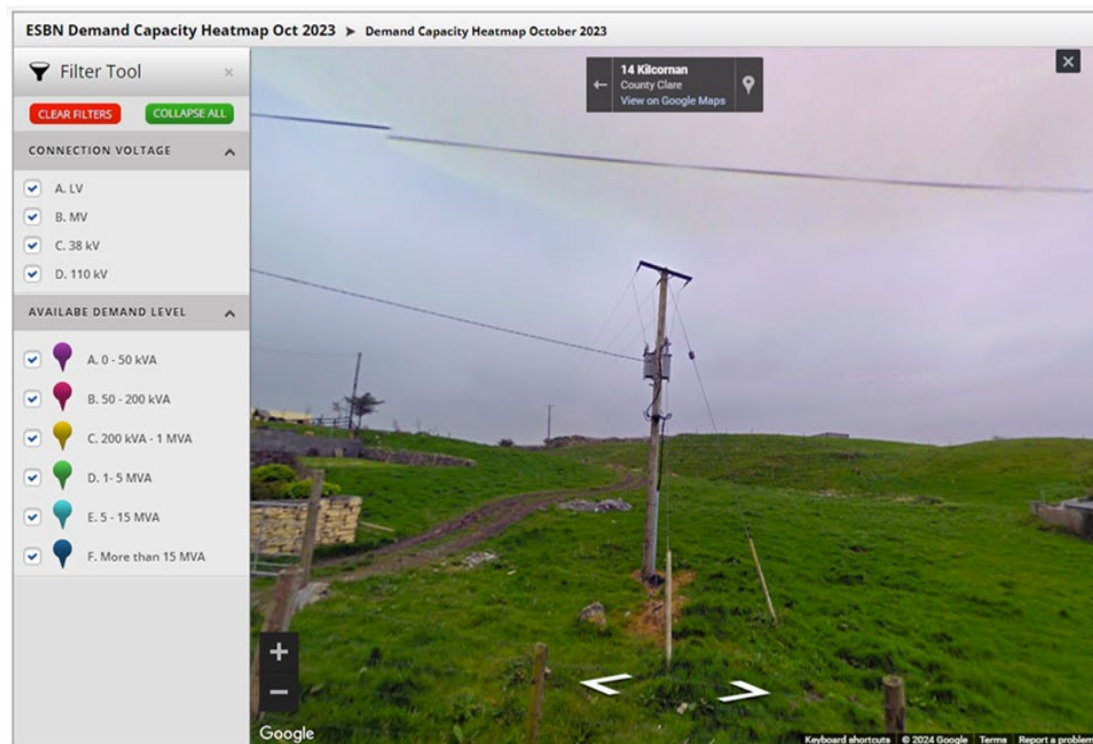


Figure 5 Screenshot of an ESNB substation



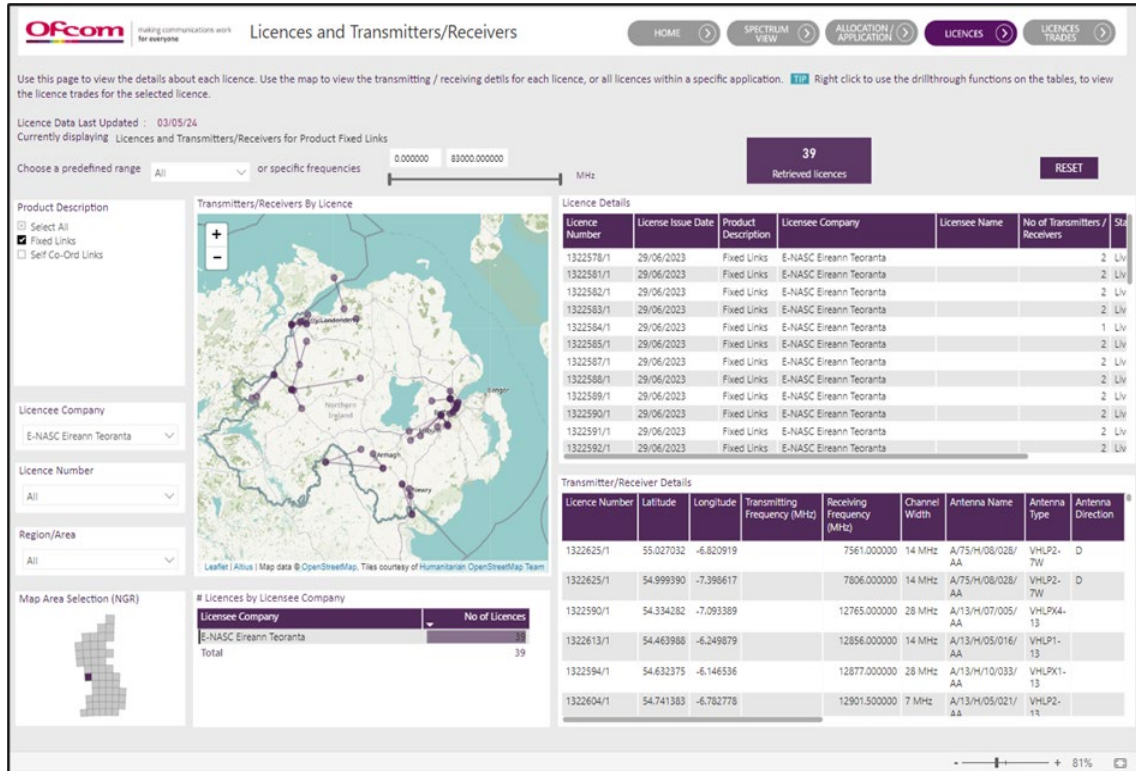
If you are having issues with the above map loading please clear your cookie settings

Figure 6 Screenshot of an ESBN substation in Streetview mode



Annex: 2 Fixed link and SES licence information published by Ofcom

Figure 7 Fixed link information for E-Nasc Eireann Teoranta¹⁰⁶



¹⁰⁶ Enet is a registered business name of enasc éireann teoranta – <https://www.enet.ie/about-us/>

Figure 8 Fixed link information Northern Ireland Electricity Networks Limited

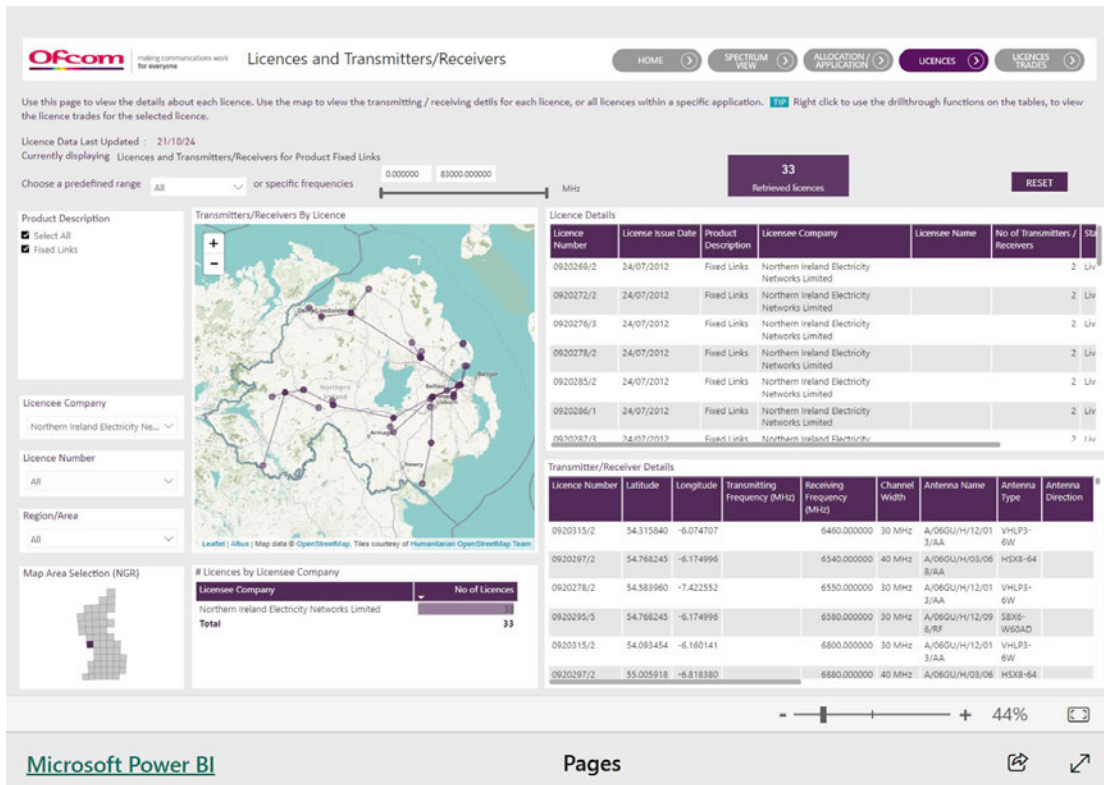


Figure 9 Fixed link information for Mobile Broadband Network Limited¹⁰⁷

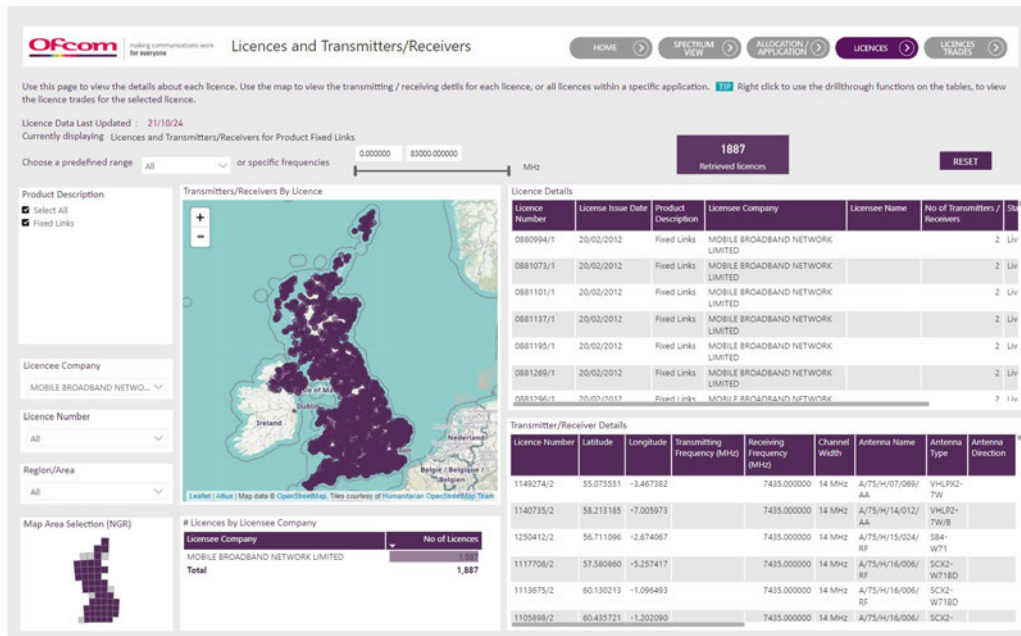


Figure 10 Ofcom Spectrum Information Portal - Satellite Earth Station Information

¹⁰⁷ Mobile Broadband Network Limited was formed in 2007 by EE and Three as a network sharing venture – <https://mbnl.co.uk/>

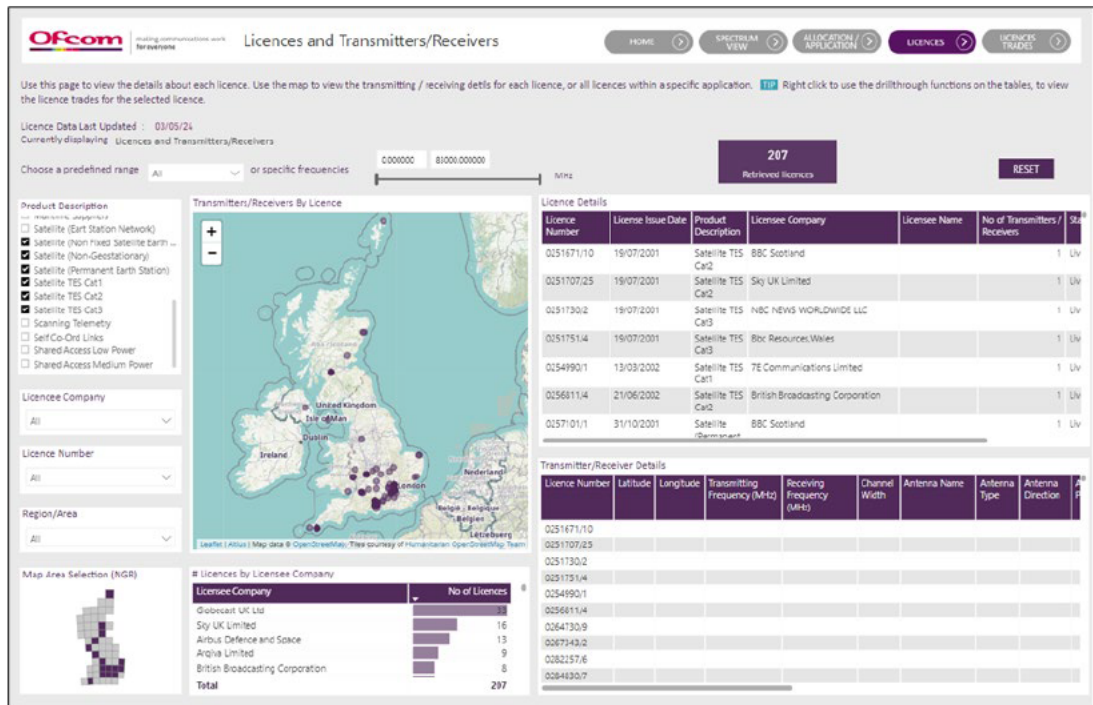


Table 4: Licence information published by Ofcom on its Spectrum information portal

| Published by Ofcom | To be published by ComReg | Published by Ofcom | To be published by ComReg | Published by Ofcom | To be published by ComReg |
|--------------------------|---------------------------|-------------------------|---------------------------|--|---------------------------|
| Licence Number | Yes | Frequency (Hz) | Yes | Antenna Gain | Yes |
| License Issue Date | No | Station Type (Tx/Rx) | No | Antenna Azimuth | Yes |
| Latitude(Deg, Min, Sec) | No | Channel Width (Hz) | Yes | Horizontal Elements | No |
| Longitude(Deg, Min, Sec) | No | Height Above Sea Level | Yes | Vertical Elements | No |
| Latitude(Dec Deg) | Yes | Antenna ERP (dBm/dBW/W) | Yes | Antenna Height | Yes |
| Longitude(Dec Deg) | Yes | Antenna ERP Type | No | Antenna Location (indoor/outdoor/etc.) | No |
| National Grid Reference | No | Antenna Type | No | EFL (Upper frequency/Lower frequency) | Yes |
| Antenna Direction | Yes | Fade Margin | No | Tradeable (yes/no) | No |
| Antenna Elevation | Yes | Emission Code | No | Publishable information (yes) | Yes |

| | | | | | |
|----------------------|-----|-------------------------|-----------------------------|---|----|
| Antenna Polarisation | Yes | Licensee Name | Yes | Product Code (i.e. Licence type code) | No |
| Antenna Name | No | Licensee Company | Yes | Product Description (i.e. Licence type) | No |
| Feeding Loss | No | Status (Live/cancelled) | Yes – live information only | | |

Table 5: Earth Station information published by Ofcom as part of its NGSO earth station consultation process compared with ComReg’s proposal in the Consultation.

| Station details | To be published by ComReg | Site Details | To be published by ComReg | Satellite Details | To be published by ComReg | Earth Station Details | To be published by ComReg |
|-------------------|---------------------------|-------------------------------------|---------------------------|------------------------------------|---------------------------|---|---------------------------|
| Name of Station | Yes | Coordinate System | No | Satellite Name | Yes | Antenna Performance Pattern | No |
| Station Type | Yes | NGR Letters | No | Orbital Location Degrees (Decimal) | Yes | Antenna Diameter (m) | Yes |
| Class of Station | No | Easting (5 numbers) | No | Directional indicator (E/W) | Yes | Antenna Height (above ground level) (m) | Yes |
| Nature of Service | No | Northing (5 numbers) | No | Geostationary/Non Geostationary | Yes | Tx Antenna Gain (dBi) | Yes |
| | | Latitude (± decimal degrees North): | Yes | | | Tx Antenna beamwidth (degrees) | Yes |
| | | Longitude (± decimal degrees East): | Yes | | | Rx Antenna Gain (dBi) | Yes |
| | | Site Height (AMSL) (m) | Yes | | | Rx Antenna Beamwidth (degrees) | Yes |
| | | | | | | Antenna Azimuth (degrees) | Yes |

| | | | | | | | |
|--|--|--|--|--|--|--|-----|
| | | | | | | Antenna Elevation (degrees) | Yes |
| | | | | | | Receiver System Noise Temperature (Kelvin) | Yes |

Table 6: Earth Station transmit parameters published by Ofcom as part of its NGSO earth station consultation process.

| Transmit Parameters | |
|--|--|
| Centre Frequency of accessible bandwidth (MHz) | Nature of signal modulating main carrier |
| Accessible Bandwidth required (MHz) | Type of information transmitted |
| Polarisation Type | Details of signal |
| Polarisation Angle (if appropriate) (degrees) | Type of multiplexing |
| Necessary bandwidth of emission index | Max Antenna Input Peak Power of emission (dBW) |
| Type of modulation of main carrier | |

Table 7: Earth Station receive parameters published by Ofcom as part of its NGSO earth station consultation process

| Receive Parameters | |
|--|--|
| Centre Frequency of accessible bandwidth (MHz) | Type of modulation of main carrier |
| Accessible Bandwidth required (MHz) | Nature of signal modulating main carrier |
| Polarisation Type | Type of information transmitted |
| Polarisation Angle (if appropriate) (degrees) | Details of signal |
| Necessary bandwidth of emission index | Type of multiplexing |