



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

COVID-19: Temporary spectrum management measures

Response to Consultation and Decision on a further temporary spectrum rights (No.3) framework in the 700 MHz Duplex, 2.1 GHz and 2.6 GHz Bands

Response to Consultation, Decision and final Draft Regulations

Reference: ComReg 21/96

Decision D08/21

Date: 23/09/2021

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Chapter 1

1 Introduction

- 1.1 On 8 September 2021, the Commission for Communications Regulation (“ComReg”) published Document 21/87¹, in which it set out its proposals for a further temporary electronic communications service (“ECS”) (No.3) licensing framework beyond 1 October 2021 (the “Proposed Approach”), given the temporary and extraordinary situation currently presented by COVID-19 and the increased traffic demands placed on wireless networks arising from the Government measures to address same, (hereinafter termed the “Temporary Situation”). Document 21/87 also included a detailed consideration of the anticipated end to the Temporary Situation in the near future and the need for Mobile Network Operators (“MNOs”) to begin transitioning out of any further temporary rights granted.
- 1.2 ComReg received submissions from the following interested parties in response to Document 21/87:
- Eircom Limited and Meteor Mobile Communication Limited (trading as ‘eir’ and ‘open eir’) (“Eir”);
 - Imagine Communications Group (“Imagine”);
 - Three Ireland (Hutchison) Limited (“Three”); and
 - Vodafone Ireland Limited (“Vodafone”).
- 1.3 The non-confidential versions of these submissions are contained in Annex 3 of this document.
- 1.4 This document sets out ComReg’s response to consultation and final decision in respect of the Proposed Approach.

¹ Document 21/87 “Covid-19: Temporary Spectrum Management Measures –Further temporary spectrum rights (No.3) in the 700 MHz Duplex, 2.1 GHz and 2.6 GHz Bands”, published 8 September 2021.

ComReg expects this to be the final temporary licensing framework on the basis of the Temporary Situation

- 1.5 As discussed in Document 21/87, and having considered the updated information in this document, ComReg remains of the view that **it remains appropriate to implement a further temporary licensing framework beyond 1 October 2021** for a 6-month period.
- 1.6 However, as noted in paragraph 1.2 of Document 21/87, and based on current information, **ComReg expects this to be its final temporary licensing framework on the basis of the Temporary Situation** noting, among other things, that there have been recent significant changes in the prevailing circumstances relevant to any further temporary licensing framework, including that:
- On 31 August, the Government set out its plan for the final phase of its response to the COVID-19 pandemic - *COVID-19: Reframing the Challenge, Continuing Our Recovery and Reconnecting*² (“Government’s COVID-19 Plan”); and
 - The Government’s COVID-19 Plan will see “*..the majority of restrictions lifted and replaced by guidance and advice to enable us to work together to protect ourselves and to live our lives to the fullest extent possible*” and among other things it sets out that:
 - from 20 September 2021, attendance at work for specific business requirements may commence on a phased and staggered attendance basis; and
 - from 22 October 2021 onwards³ the final significant shift in approach should occur with the majority of restrictions being lifted including the requirements for physical distancing and for mask wearing outdoors and in indoor private settings⁴.
- 1.7 In Chapter 2 of this document, some further updates are provided on the Government’s COVID-19 Plan, as well as in relation to the MNOs’ mobile voice and data traffic volumes, where among other things, ComReg notes that:

²[COVID-19 - Reframing the challenge, continuing our recovery and reconnecting - https://www.gov.ie/en/publication/3361b-public-health-updates/](https://www.gov.ie/en/publication/3361b-public-health-updates/)

³ Based on the criteria of at or close to 90% of people 16 or over being fully vaccinated in the coming weeks, and having regard to the incidence and behaviour of the disease at that time.

⁴ As noted on the [gov.ie](https://www.gov.ie/) website – the “*Measures that will remain in place include, self-isolation when we have symptoms*” and “*mask wearing in healthcare settings, indoor retail and on public transport*”

- on 20 September 2021, there was a further easing of restrictions in line with the Government's COVID-19 Plan, including the commencement of a return to workplaces for specific business reasons;
- on 15 September 2021, the National Public Health Emergency Team (NPHE) indicated that Ireland remains on track for the full easing of COVID-19 restrictions on 22 October⁵; and
- the mobile voice and data traffic trends discussed in paragraph 2.20 of Document 21/87 remain valid, albeit that mobile voice traffic volumes have increased somewhat in September 2021, in line with seasonal expectations.

1.8 It is important to note that the background to, and context of, the Proposed Approach is exceptional and, while in this document, ComReg has decided to introduce a further temporary spectrum licensing framework of up to 6 months, ComReg:

- reminds interested parties that the **existing and any further Temporary ECS Licensing frameworks are entirely without prejudice to ComReg's Multi Band Spectrum Award (MBSA2)** process for the long-term assignment of spectrum rights of use in the 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz bands (see Section 2.5 of Document 21/87) as provided for in the MBSA2 decision⁶; and
- emphasises that **network operators should now begin to make transition plans and take actions in advance of the end of the further temporary licensing framework provided for herein**, noting that, based on current information, ComReg expects this to be its final proposal for a further temporary licensing framework on the basis of the Temporary Situation.

1.1 Structure of document

1.9 The remainder of this document is structured as follows:

- **Chapter 2:** sets out some background information relevant to this consultation, including updated information on the Government measures adopted to address COVID-19 and some updated network traffic information;

⁵ Irish Times, "[Coronavirus: 24 deaths reported in the State in past week, Ireland on track for full easing of Covid restrictions in October, Nphet says](#)", published 15 September 2021

⁶ ComReg Document No. [20/122](#), ComReg Decision D11/20; *Multi Band Spectrum Award - Response to Consultation and Decision - The 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands*, published 18 December 2020.

- **Chapter 3:** summarises ComReg’s consideration in Document 21/87 on whether it would be appropriate in principle to provide for a further temporary spectrum licensing (No. 3) framework in light of the Temporary Situation, the views of respondents and ComReg’s assessment of same;
- **Chapter 4:** summarises ComReg’s licence conditions proposals set out in Document 21/87 with respect to a further temporary spectrum licensing (No. 3) framework, the views of respondents and ComReg’s assessment of same;
- **Chapter 5:** sets out ComReg’s Decision based on the views expressed by ComReg in the preceding chapters;
- **Chapter 6:** outlines the next steps;
- **Annex 1:** includes a glossary of terms;
- **Annex 2:** summarises ComReg’s statutory functions, objectives and duties relevant to the management of Ireland’s radio frequency spectrum;
- **Annex 3:** sets out the non-confidential submissions to Document 21/87; and
- **Annex 4:** sets out the draft regulations to facilitate the assignment of further temporary spectrum rights of use by ComReg.

Chapter 2

2 Background Information

2.1 In Chapter 2 of Document 21/87, ComReg set out some background information relevant to its proposals in that consultation including:

- the COVID-19 Temporary Spectrum Licensing Frameworks implemented to date;
- the Government measures to address COVID-19 and associated vaccination plan;
- network traffic information since the adoption of the Government measures;
- consumer information: mobile voice and mobile data services;
- ComReg's MBSA2 project; and
- other supporting actions such as spectrum leasing.

2.2 In this chapter, ComReg sets out updated information relevant to this material.

2.1 COVID19: Government's measures and vaccination plan⁷

2.3 In relation to COVID-19 Government measures, ComReg notes that the background information presented in Section 2.2 of Document 21/87 remains valid and notable updates since then include that:

- on 20 September there was a further easing of restrictions in line with the Government's COVID-19 Plan including the commencement of a return to workplaces for specific business reasons;
- in support of the return to workplaces, on 7 September 2021 the Labour Employer Economic Forum (LEEF) consultative group⁸

⁷ This overview is provided only to aid understanding of the effects of these measures on networks and is not intended to be comprehensive. Reliance should not be placed on this overview for other purposes including, without limitation, health protection and regulatory compliance. ComReg also notes that the Government plan may change in light of the developing situation.

⁸ The consultative stakeholder forum, under the aegis of Labour Employer Economic Forum, was established to oversee implementation of the Work Safely Protocol. Members of the Stakeholder Forum are Ibec, CIF, ICTU, SIPTU, the HSA, the HSE, the Department of Health, Department of Enterprise, Trade and Employment, the Department of Agriculture, Food and Marine, Department of Health, and the Department of Taoiseach.

published a guidance note⁹ on returning safely to the workplace and, on 16 September 2021, it published an update to the work safety protocol¹⁰ to reflect the most up-to-date available public health advice;

- on 10 September 2021, the head of the World Health Organisation in Europe expressed doubts about vaccines' ability to end the COVID-19 pandemic¹¹; and
- on 15 September 2021, NPHET indicated that Ireland remains on track for the full easing of COVID-19 restrictions on 22 October¹².

COVID-19 Vaccination Programme

2.4 As of 22 September 2021, the cumulative vaccine uptake for first dose in adults over 18 in Ireland is 92.4% and for full vaccination is 90.3%¹³, giving Ireland one of the highest rates of COVID-19 vaccination doses administered in Europe¹⁴.

2.2 Network traffic since the adoption of COVID-19 measures

2.5 This section presents updated information on the network traffic demands being placed on MNOs in light of the Temporary Situation informed by:

- I. The weekly network performance reports provided by network operators to ComReg's Network Industry Forum¹⁵; and
- II. ComReg's Quarterly Key Data Reports and the Data Portal where ComReg informs stakeholders of the key trends and developments in the Irish electronic communications market¹⁶.

⁹ <https://assets.gov.ie/197803/98afcc42-aa61-40ad-8eb2-b7d34a555431.pdf> published 7 September 2021

¹⁰ <https://assets.gov.ie/74103/6b5dc9ecab2a489280a5a0cdcc647c5c.pdf> published 16 September 2021

¹¹ RTE website, "[WHO expresses doubts about vaccines ending pandemic](#)", 10 September 2021

¹² Irish Times, "[Coronavirus: 24 deaths reported in the State in past week, Ireland on track for full easing of Covid restrictions in October, Nphet says](#)", published 22 September 2021

¹³ Irish Times, "Covid-19 Vaccine Tracker..", available at www.irishtimes.com

¹⁴ Statista, "Number of Covid-19 Vaccination doses administered in Europe as of 19 September 2021, by country", available at www.statista.com

¹⁵ The network performance report and associated data provides recent information on how mobile voice and data traffic has grown since the introduction of COVID-19 measures. This data is reported weekly with records submitted up to 20 September 2021.

¹⁶ Information from the ComReg Quarterly Key Data Reports allows for comparison with time periods before the introduction of COVID-19 measures and therefore provides relevant information on the extent to which mobile voice and data increases are natural or specifically related to the introduction of COVID-19 measures.

- 2.6 Since Document 21/87 was published, three additional weekly network performance reports were compiled (on 6, 13 and 20 September 2021), and on 9 September 2021 ComReg published the Quarterly Key Data Report for Q2 2021 (ComReg Document 21/88¹⁷).

I. Network Performance Reports

- 2.7 Figure 1 presents aggregate monthly change in voice and data traffic volumes on the mobile networks from February 2020 to September 2021 (partial data available for this month), compared to a pre-COVID-19 base level (i.e., February 2020).

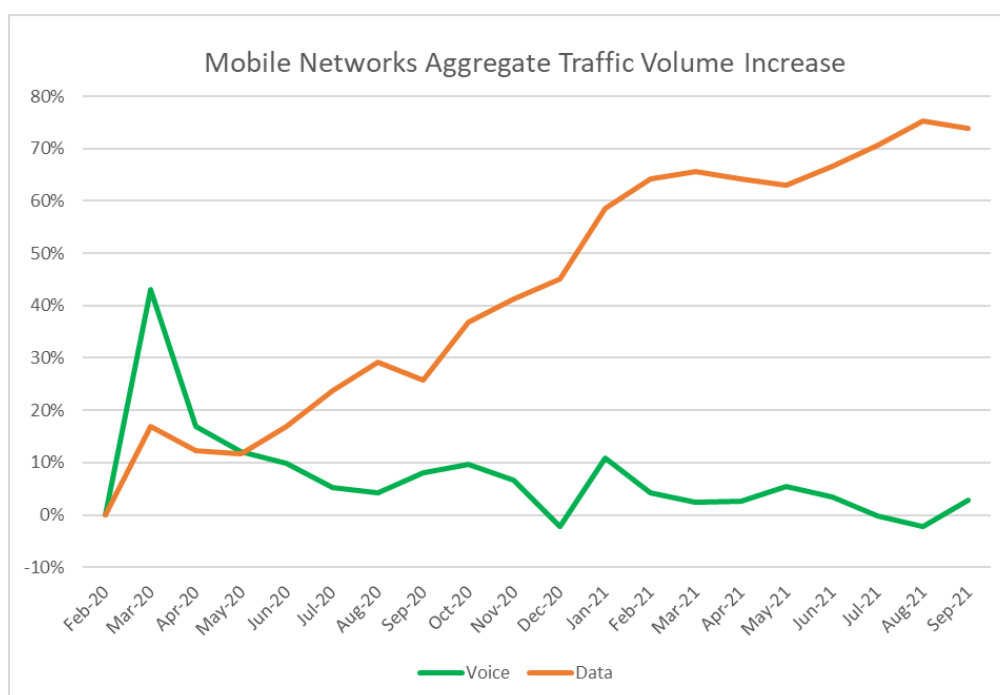


Figure 1: Mobile Networks Monthly Aggregate Traffic Volume Increase¹⁸

- 2.8 From the above, ComReg observes that the mobile voice and data traffic trends discussed in paragraph 2.20 of Document 21/87 remain valid, albeit that mobile voice traffic volumes have increased somewhat in September 2021, in line with seasonal expectations.

II. ComReg Quarterly Key Data

- 2.9 The data taken from ComReg's Quarterly Key Data Reports is presented as follows:

¹⁷ ComReg Document 21/88, "Quarterly Key Data Report – Q2 2021", published 9 September 2021.

¹⁸ Note that these are total traffic volume changes against a base level before the COVID-19 government restrictions were put in place.

- Figure 2 provides information on growth of mobile data expressed in terms of volumes and annual % growth; and
- Figure 3 provides information on growth of mobile voice expressed in terms of volume and annual % growth.

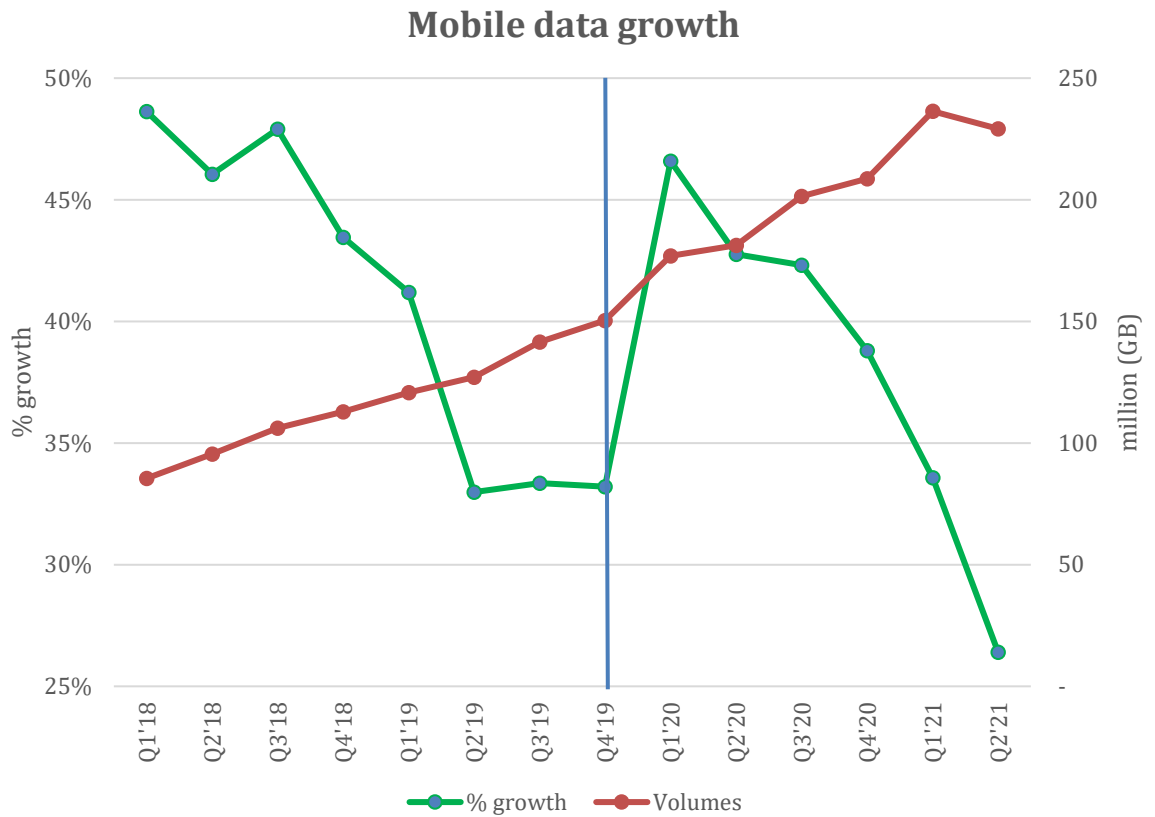


Figure 2: Mobile data growth

2.10 Figure 2 shows the growth in mobile data for each quarter in terms of volume and rate of growth over the past three years. This provides a contrast on how mobile data growth evolved before and after the introduction of COVID-19 measures. In summary:

- prior to the introduction of COVID-19 measures at the beginning of 2020:
 - data volumes (i.e., each GB uploaded or downloaded) were already increasing significantly; and
 - growth rates had stabilised around 30 - 35% for the previous three quarters.

- each of the four quarters in 2020 show growth rates above pre-COVID-19 levels, with a peak growth rate during COVID-19 of 47% in Q1 2020.
- rates of growth since that peak steadily declined in subsequent quarters such that annual data growth rates were comparable to pre-COVID-19 levels in Q1 2021 and below pre-COVID-19 levels in Q2 2021.

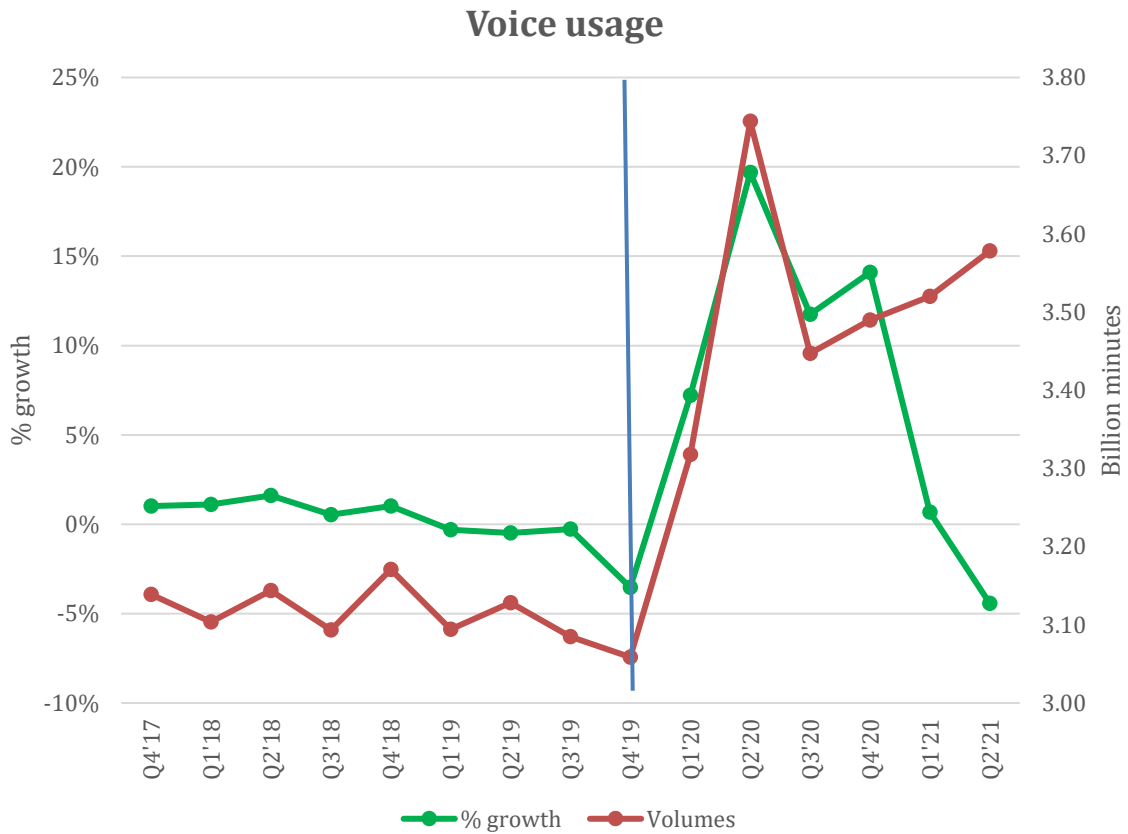


Figure 3: Mobile voice minutes growth

2.11 Figure 3 shows the growth in mobile voice minutes for each quarter in terms of volume and rate of growth over the past three years. This provides a contrast on how mobile voice growth evolved before and after the introduction of COVID-19 measures. In summary:

- prior to the introduction of COVID-19 measures at the beginning of 2020:
 - volume of minutes on a quarterly basis was around 3.1 billion minutes (aside from some seasonable variability);
 - there was close to a zero rate of growth for the period in the lead up to COVID (indeed it has been close to zero for the previous 5 years).

- each of the four quarters in 2020 show growth rates and volume of minutes above pre-COVID levels, with peak increases during COVID-19 of around 20% or 3.7 billion minutes in Q2 2020.
- since that peak in Q2 2020, volumes and the rate of growth have declined, although volumes in Q2 2021 remained above pre-COVID levels.

2.3 MBSA2: Long-term assignment of spectrum rights in the 700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz bands

- 2.12 As set out in Section 2.5 of Document 21/87, ComReg is continuing to progress its MBSA2 project for the long-term assignment of spectrum rights of use in the 700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz bands, noting that certain parts of the MBSA2 Decision (Decision D11/20¹⁹) are under appeal²⁰.
- 2.13 As outlined by ComReg in Information Notice Document 21/04R²¹, Three's appeal does not of itself affect the taking effect of the MBSA2 Decision or prevent action being taken to implement it and ComReg is opposing the appeal in full.
- 2.14 The Appeal hearing was held in June 2021. It was mentioned in court on 23 July and was adjourned with the Court indicating that further directions would be issued to the parties.

¹⁹ See:

- [ComReg Document No. 20/122, ComReg Decision D11/20](#); *Multi Band Spectrum Award - Response to Consultation and Decision - The 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands*, published 18 December 2020. Available at: <https://www.comreg.ie/publication/>;
- [ComReg Document No. 20/122a](#); *Multi Band Spectrum Award - DotEcon Report Assessment of responses to consultation on Draft Decision*, published 18 December 2020. Available at: www.comreg.ie/publication/;
- [ComReg Document No. 20/122b](#); *Multi Band Spectrum Award - A Report by Plum Consulting London LLP*, published 18 December 2020. Available at: www.comreg.ie/publication/; and
- [ComReg Document No. 20/122s](#); *Multi Band Spectrum Award - Updated Versions of Non-confidential Submissions to Document 19/124, 20/32 and 20/56*, published 18 December 2020. Available at: www.comreg.ie/publication/.

²⁰ On 14 January 2021, Three Ireland (Hutchison) Limited and Three Ireland Services (Hutchison) Limited (collectively "Three") lodged an appeal against the MBSA2 Decision to the High Court.

²¹ ComReg Document [21/04R](#), "*Appeal by Three in relation to Multi Band Spectrum Award – The 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands*" published 20 January 2021 and revised on 29 January 2021, available at www.comreg.ie.

2.4 Other supporting actions: spectrum leasing

- 2.15 In relation to spectrum leasing, since Document 21/87 was published, ComReg has received a submission from Imagine indicating that it hopes to secure further lease agreements with the MNOs and Dense Air Limited and that Imagine will inform and notify ComReg as appropriate of same as soon as possible.

Chapter 3

3 Appropriateness of a further temporary spectrum licensing (No.3) framework

3.1 This chapter sets out ComReg’s final position on the appropriateness of implementing a further COVID-19 temporary spectrum licensing (No.3) framework given the Temporary Situation.

3.1 Summary of Chapter 3 in Document 21/87

3.2 In Chapter 3 of Document 21/87, ComReg set out its preliminary assessment on whether it would be appropriate to implement a further COVID-19 temporary spectrum licensing framework given the Temporary Situation.

3.3 Section 3.1 outlined the key points from Document 21/74²² wherein ComReg set out guidance regarding the information requirements and next steps in considering whether a further temporary licensing framework beyond 1 October 2021 might be appropriate.

3.4 In summary, that guidance recommended that the MNOs submit a joint or common request for any further temporary licensing framework to ComReg by 6 August 2021 which would:

- set out the specific details of any such joint/common request; and
- provide sufficiently detailed supporting information based on the updated and prevailing COVID-19 considerations at that time.

3.5 Section 3.2 set out the information submitted by the MNOs in support of their request for a further temporary spectrum licensing framework and noted that:

- on 21 July (Vodafone) and 22 July 2021 (Eir and Three), the three MNOs each submitted a common letter to ComReg (the “MNO Common Letter”) wherein the MNOs “*jointly request that the terms of the current Temporary Spectrum Management Measures detailed in ComReg 20/88 (D08/20) are extended unchanged*”; and

²² ComReg Document 21/74 - COVID-19 Potential Further Temporary ECS Licensing – July 2021 update and next steps in considering any further temporary licensing framework – Published 9 July 2021.

- each of the MNOs separately submitted the requested information (identified at paragraph 40 of Document 21/74) in support of their common request.
- 3.6 In section 3.3 of Document 21/87, ComReg set out its observations on the common request with respect to two separate timeframes, being: (i) 2 October 2021 to 21 October 2021 and (ii) 22 October 2021 to 1 April 2022, noting:
- firstly, that the request is for the terms of the current temporary spectrum measures to be extended unchanged for the six-month time period from 2 October 2021 to 1 April 2022; and
 - secondly, that under the Government's COVID-19 Plan, on 22 October 2021 the majority of COVID-19 measures are planned to be lifted which will be a significant change in the prevailing circumstances to consider in relation to any future temporary spectrum licensing framework.
- 3.7 In relation to the timeframe 2 October 2021 to 21 October 2021, ComReg (in paragraph 3.30 of Document 21/87) observed several factors in support of a further temporary licensing framework, including that
- the Government measures to tackle COVID-19 pandemic will remain in place until 21 October 2021; and
 - while network traffic levels have stabilised (see Section 2.3 of Document 21/87) considerably since March 2020 (when the networks experienced a sharp rise in both voice and data traffic levels), the MNOs' claim that:
 - (i) their networks are still carrying traffic directly attributable to the COVID-19 measures; and
 - (ii) the removal of temporary spectrum rights would cause congestion and service degradation.
- 3.8 In relation to the timeframe 22 October 2021 to 1 April 2022, ComReg observed that the planned significant shift in the Government's approach to managing COVID-19 from 22 October onwards with the planned removal of the majority of COVID-19 measures means that the Temporary Situation can reasonably be expected to cease entirely during the timeframe 22 October 2021 to 1 April 2022.
- 3.9 ComReg's observations for this timeframe therefore reflected considerably different factors to those identified for previous timeframes, including:
- (i) the withdrawal of certain COVID-19 measures on a phased basis over time and the impact that this should have on networks noting,

in particular, that Government's COVID-19 Plan states that the withdrawal of the requirement to work from home is to be *"on a phased and cautious basis appropriate to each sector"*;

- (ii) the possibility that the Government may have to amend specific aspects of its approach to managing COVID-19, given that there are uncertainties in relation to the trajectory of COVID over the coming period; and
- (iii) consideration of the need for the MNOs to make transition arrangements in advance of the cessation of any further temporary spectrum rights.

3.10 In relation to (iii) above and noting that temporary spectrum licences have always been justified on the basis of prevailing Government COVID-19 measures²³, **ComReg observed that network operators should now begin to make transition plans and take actions in advance of the end of the presently proposed temporary spectrum licences.**

3.11 Further, in paragraphs 3.36 to 3.41 of Document 21/87, ComReg noted that there are various factors for the MNOs to consider in any transition planning, including that it appears as if the MNOs would only need to consider a transition plan for the 700 MHz band, as:

- the 2.6 GHz band is not in use by any operator; and
- for the 2.1 GHz band, a licensing framework²⁴ is available to the existing 2.1 GHz band licensees (Eir, Three and Vodafone) to obtain a Liberalised Use 2.1 GHz Band Licence. In that regard, in June 2021, Three and Vodafone both applied for and were each granted such a licence. ComReg also observes that Eir is also eligible to apply for a Liberalised Use 2.1 GHz Band Licence and there are no impediments to Eir being granted same.

²³ For example, in the application declaration form, (See Part 6 of the application form Document 20/24a) Applicants confirm the following in applying for a temporary spectrum licence.

"I confirm that the Applicant is fully aware that the Licences are being made available solely to accommodate the claimed unanticipated spike in demand arising from the extraordinary situation relating to COVID-19, that all Licences granted or renewed under the Regulations will expire 3 months after." (Emphasis Added)

²⁴ [S.I 265 of 2021](#) - Wireless Telegraphy (Third Generation and GSM Licence (Amendment) and Interim Licensing) Regulations 2021, available at www.irishstatutebook.ie/.

3.12 Section 3.4 outlined ComReg’s preliminary assessment of whether a further temporary spectrum licensing framework would be appropriate in principle. ComReg then set out its preliminary view that the Proposed Approach would be in the best interests of consumers and unlikely to distort competition whilst being appropriate in the context of ComReg’s functions, objectives and duties, including being objectively justified and proportionate.

3.2 Views of respondents to Document 21/87

Further temporary licensing framework to 1 April 2022

3.13 All four respondents to Document 21/87 are supportive of ComReg’s proposals for a further temporary spectrum licensing framework, as outlined below.

3.14 Eir *“welcomes ComReg’s proposal”* and submits that *“the rationale for making available temporary spectrum rights is well presented”*.

3.15 Imagine *“supports the ComReg draft decisions in document 21/87”*.

3.16 Three *“agrees with ComReg’s proposal”* and it submits that this *“will allow mobile networks to continue to meet customer demands under what are unusual times”*. In addition, Three submits that *“we must remain prepared for the impact that any future health protection measures might have on networks”*, noting that while Ireland is emerging from COVID-19 restrictions and *“we can expect that network traffic will return to more normal patterns”*, this has not happened yet.

3.17 Vodafone submits that ComReg is *“fully justified in extending these Temporary Spectrum measures for the further period proposed”* and states that it *“will apply for permission to use these measures and continue to add to their network to maintain excellent service for customers”*. In support of its view, Vodafone submits that:

- its network is still experiencing changes in network traffic not foreseen pre-COVID-19, in terms of much higher mobile data traffic levels than forecast and a considerably changed geographic spread of demand. Further, it is unknown when or indeed these traffic patterns will return to the pre-COVID-19 distribution;
- using its pre-COVID-19 spectrum assignments it could only add this additional capacity by building new radio sites which cannot be done quickly enough to support the rapidly changing demand generated by changes in work practices, and other changes associated with COVID-19;

- it expects growth in demand this year to be considerably in excess of that forecast pre-COVID-19;
- absent an extension of the Temporary Spectrum measures it would likely see a considerable increase in congested cells in the network and a degradation of service for all customers in the form of reduced data rates or frequently interrupted data services; and
- using 700 MHz spectrum at existing sites will significantly increase capacity in the most congested areas of the network. Sites in this band are particularly useful in rural areas where traffic has increased most significantly.

3.18 In addition, Vodafone agrees that the current proposal to extend the measures for a period of up to six months will not materially distort competition.

Further temporary licensing framework(s) beyond 1 April 2022

3.19 Noting paragraph 1.2 of Document 21/87 where ComReg stated that it *“expects that this will be its final proposal to put in place a further temporary licensing framework on the basis of the Temporary Situation”*, Eir submits that it is too early to conclude that no further temporary licensing frameworks may be required beyond April 2022 and submits the following.

3.20 Firstly, Eir submits that ComReg’s consideration of the landmark date of 21 October 2021 may be too binary as, in its view, much uncertainty exists. In this regard, Eir notes that the World Health Organisation expresses doubt that vaccines will end the pandemic in the near term, and it states that this *“would indicate that a return to life Pre Covid is unlikely to prevail from late 2021”*.

3.21 Secondly, Eir submits that time will be needed to understand the full impact of changed consumer practices on its network.

3.22 In relation to the work sector, Eir notes that, while milestone dates have been announced for a return to the office, many organisations will return staff on a phased basis, and a number of organisations have also indicated there will be a shift towards hybrid models of working between office and home. Eir submits that this will likely be the new normal for many office-based staff meaning that connectivity will be required both at homes and places of work in addition to commuter routes, and that this will result in more widespread continued demand for mobile services and availability of spectrum to support continued and growing data use.

3.23 In relation to the education sector, Eir submits that there is likely to be a significant continued requirement for home connectivity resulting in elevated demand for mobile services for these groups during term times. In this regard, Eir notes that:

- in the first two weeks of the current school term, it is indicated that ~20K pupils were required to 'isolate' out of school premise and remote school through online means; and
- Universities have yet to return and may be operating with some degree of online tuition.

3.24 Eir also submits that it has experienced sustained mobile data growth in 2021 with over 50% year-on-year growth.

3.25 Thirdly, Eir disagrees with ComReg's observation (at paragraph 3.37 of Document 20/87) that "*there are no impediments to Eir being granted*" a Liberalised Use 2.1 GHz Band Licence and submits that:

- ComReg's early liberalisation rules, combined with the impact on timelines arising from the ongoing appeal of the MBSA2 Decision, mean that Eir would be required to agree to an unknown liability in terms of the early liberalisation fee; and
- The early liberalisation fee will be determined by the outcome of the auction and the extent of the liability will not be known until after the appeal has been concluded and the award subsequently completed.

3.26 Fourth, Eir also notes that the timeline for the MBSA2 has seen continued delay and uncertainty through no action by Eir, and it submits that a failure to continue with a temporary spectrum licensing framework during a time of continued elevated demand would only benefit operators with existing significant spectrum holdings.

MBSA2

3.27 In relation to the MBSA2, Vodafone states that it strongly agrees with ComReg's position that the proposed Temporary ECS Licensing Framework is entirely without prejudice to the MBSA2. It submits that completing the MBSA2 is vital for support of long-term investment in telecommunications in Ireland, as it:

- will enable Vodafone to make long-term capital expenditure decisions, building additional coverage and bring new services to our customers; and

- will facilitate 5G, an important aspect of general economic and social development in Ireland for the foreseeable future.

3.28 In addition, Vodafone notes that, in the longer term, all operators will need to know the outcome of MBSA2 in order to plan and implement efficient investment and to effectively decide on the locations of new sites needed to replace the capacity provided by these Temporary Measures. Vodafone submits that this should be part of the consideration when deciding on any further measures post 1 April 2022.

Spectrum Leasing

3.29 In relation to spectrum leasing, Vodafone notes that the additional network capacity released to mobile operators by the temporary spectrum rights facilitates its leasing of 3.6 GHz Band spectrum to fixed wireless operators, improving the services they can provide.

3.30 In addition, as noted in Section 2.4 above, Imagine has indicated that it hopes to secure further lease agreements with the MNOs and Dense Air Limited, and that Imagine will inform and notify ComReg as appropriate in respect of same as soon as possible.

3.3 ComReg's assessment of respondent's views

Further temporary licensing framework to 1 April 2022

3.31 ComReg notes that all respondents support the proposal to put in place a further temporary spectrum licensing framework in respect of the Temporary Situation for the reasons set out in Document 21/87, as well as on the basis of the additional information submitted as summarised above. ComReg also notes that no respondent raised concerns that the Proposed Approach would materially distort competition.

Further temporary licensing framework(s) beyond 1 April 2022

3.32 In relation to Eir's comments that further temporary licensing framework(s) may be needed beyond 1 April 2022, ComReg notes that this matter is beyond the scope of current Decision and that ComReg has not made a decision in that regard. Instead, ComReg will consider at the appropriate time all relevant material before it, including the observations made by Eir noted above, in determining whether some form of future temporary licensing regime may be appropriate.

3.33 Notwithstanding, and based on all information currently available, **it is reasonable to expect this to be its final temporary licensing framework on the basis of the Temporary Situation.**

MBSA2

3.34 In relation to the MBSA2, ComReg notes the points raised by Vodafone, including that:

- completing the MBSA2 is vital for support of long-term investment in telecommunications in Ireland; and
- operators will need to know the outcome of MBSA2 in order to plan and implement efficient investment and that this should be part of the consideration when deciding on any further measures post 1 April 2022.

3.35 As noted previously, the temporary licensing frameworks on the basis of the Temporary Situation have been justified on the basis of prevailing Government COVID-19 measures, and factors such as the completion of the MBSA2 are not relevant to determining the duration of such temporary licensing frameworks.

3.36 Notwithstanding the above, ComReg observes that this is a factor that the MNOs will need to consider in relation to transition planning.

Spectrum Leasing

3.37 ComReg notes Vodafone's and Imagine's submission with regard to spectrum leasing and notes Imagine's hopes that further lease agreements will be secured with the MNOs and Dense Air Limited MNO.

3.2 ComReg's final position

3.38 Considering the above, and for the reasons outlined in Chapter 3 of Document 21/87, ComReg's final position is that the Proposed Approach would be appropriate in the context of ComReg's functions, objectives and duties, including being objectively justified, non-discriminatory and proportionate.

Chapter 4

4 Licence Conditions

4.1 This chapter sets out ComReg's final position on licence conditions for a further temporary spectrum licensing framework given the Temporary Situation.

4.1 Summary of Chapter 4 in Document 21/87

4.2 In Chapter 4 of Document 21/87, ComReg:

- provided a summary of the key licensing elements in the previous and current Temporary ECS Licensing Frameworks including: the spectrum bands, assignments and compatibility considerations; applicant eligibility and the supporting information requirements²⁵; licence duration; fees; and coverage obligations;
- noted the MNOs joint request *“that the terms of the current Temporary Spectrum Management Measures detailed in ComReg 20/88 (D08/20) are extended unchanged.”*;
- set out information on the views of other stakeholders (Virgin Media, 2RN and the IAA) which, in summary, supported the maintenance of the existing licence conditions in any further framework; and
- outlined its preliminary assessment on the material received from the MNOs and its preliminary view that any further Temporary ECS Licencing framework should employ the same licensing conditions as currently used.

4.2 Views of respondents

4.3 As noted in Chapter 3 above, all four respondents supported ComReg's licence condition proposals and no specific comments were raised in relation to those proposals.

4.3 ComReg assessment of respondents' views

4.4 ComReg observes that there was broad support for its licence condition proposals as set out in Document 21/87 and notes that no specific comments were raised in relation to ComReg's licensing proposals.

²⁵ See Section 4.1.2 of Document 21/87

4.4 ComReg's final position

- 4.5 Considering the above, and ComReg's reasoning as set out in Chapter 4 of Document 21/87, ComReg's final position is that any further Temporary ECS Licencing framework should have the same licensing conditions as currently used in the Existing Temporary ECS Licensing Framework.
- 4.6 Details of this licensing framework are outlined in the draft Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) (No. 3) Regulations set out in Annex 4.

Chapter 5

5 Decision

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

Decision

1. DEFINITIONS AND INTERPRETATION

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

“2.1 GHz Band” means radio frequency spectrum in the range 1920 to 1980 MHz paired with radio frequency spectrum in the range 2110 to 2170 MHz;

“2.1 GHz Band Block” means a 5 MHz paired block of radio frequency spectrum in the 2.1 GHz Band;

“2.1 GHz Band EC Decision” means European Commission Decision 2012/688/EC²⁶ as amended by European Commission Decision 2020/667²⁷;

“2.6 GHz Band” means radio frequency spectrum in the range 2500 to 2690 MHz;

“2.6 GHz Band EC Decision” means European Commission Decision 2008/477/EC²⁸ as amended by European Commission Decision 2020/636/EU²⁹;

“2.6 GHz Band FDD Block” means a 5 MHz block of radio frequency spectrum in the range 2500 to 2570 MHz paired with a 5 MHz block of radio frequency spectrum in the range 2620 to 2690 MHz;

“2.6 GHz Band TDD Fixed Frequency Block (Lower)” means the 5 MHz unpaired block of radio frequency spectrum in the range 2570 to 2575 MHz;

²⁶ Commission Implementing Decision of 5 November 2012 on the harmonisation of the frequency bands 1920 - 1980 MHz and 2110 - 2170 MHz for terrestrial systems capable of providing electronic communications services in the Union.

²⁷ Commission Implementing Decision (EU) 2020/667 of 6 May 2020 amending Decision 2012/688/EU as regards an update of relevant technical conditions applicable to the frequency bands 1920 – 1980 MHz and 2110 – 2170 MHz.

²⁸ Commission Decision of 13 June 2008 on the harmonisation of the 2500 - 2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community.

²⁹ Commission Implementing Decision (EU) 2020/636 of 8 May 2020 amending Decision 2008/477/EC as regards an update of relevant technical conditions applicable to the 2500 – 2690 MHz frequency band.

“2.6 GHz Band TDD Fixed Frequency Block (Upper)” means a 5 MHz unpaired block of radio frequency spectrum in the range 2615 to 2620 MHz;

“2.6 GHz Band TDD Frequency Generic Block” means a 5 MHz unpaired block of radio frequency spectrum in the range 2575 to 2615 MHz;

“2.6 GHz Band Blocks” means the 2.6 GHz Band FDD Blocks and the 2.6 GHz Band TDD Blocks;

“2.6 GHz Band TDD Blocks” means the 2.6 GHz Band TDD Fixed Frequency Block (Lower), 2.6 GHz Band TDD Fixed Frequency Block (Upper) and 2.6 GHz Band TDD Frequency Generic Blocks;

“700 MHz Duplex” means radio frequency spectrum in the range 703 – 733 MHz paired with 758 – 788 MHz;

“700 MHz Duplex Block” means a right of use in respect of a 2 × 5 MHz block of spectrum in the 700 MHz Duplex;

“700 MHz EC Decision” means Decision (EU) 2016/687³⁰;

“Authorisation Regulations” means the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations, 2011 (S.I. No. 335 of 2011);

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

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

“Electronic Communications Network” and **“Electronic Communications Service”** have the meanings assigned to them in the Framework Regulations;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011, (S.I. No. 333 of 2011);

“Further Temporary ECS Licence (No. 2)” means a licence of the type set out in draft form in Schedule 1 to the Further Temporary ECS Licence Regulations (No.2);

“Further Temporary ECS Licence Regulations (No. 2)” means the Wireless Telegraphy (FURTHER TEMPORARY ELECTRONIC COMMUNICATIONS SERVICES LICENCES) (No. 2) Regulations, 2021, as set out in S.I No. 137 of 2021;

³⁰ Commission Implementing Decision of 28 April 2016 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union.

“Further Temporary ECS Licence (No. 3)” means a licence of the type set out in draft form in Schedule 1 to the Further Temporary ECS Licence Regulations (No.3);

“Further Temporary ECS Licence Regulations (No. 3)” means the Wireless Telegraphy (FURTHER TEMPORARY ELECTRONIC COMMUNICATIONS SERVICES LICENCES) (No. 3) Regulations, 2021, as set out in draft form in Annex 4 to this document ComReg Document 21/96;

“Minister” means the Minister for the Environment, Climate and Communications;

“MNO” means a mobile network operator with an existing network in Ireland;

“Relevant Spectrum” means 700 MHz Duplex Blocks, 2.1 GHz Band Blocks, and 2.6 GHz Band Blocks;

“Undertaking” has the same meaning set out in the Framework Regulations; and

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

2. DECISION-MAKING CONSIDERATIONS

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

- i. the contents of, and the materials and reasoning referred to in, as well as the materials provided by respondents in connection with, the below-listed ComReg documents:
 - a) 18/60, 19/59R, 19/124, 20/122 and 21/40 (insofar as they are relevant to the present decisions and, in particular, concerning the technical licence conditions for the Relevant Spectrum);
 - b) 20/21;
 - c) 20/23;
 - d) 20/27;
 - e) 20/64;
 - f) 20/86R;
 - g) 20/88;
 - h) 21/05;
 - i) 21/16;
 - j) 21/24;
 - k) 21/74;

- l) 21/87; and
 - m) 21/96;
- ii. the consultants' reports commissioned, and the advice obtained by ComReg, in relation to the subject-matter of the documents and materials listed above (insofar as they are relevant to the present decisions and, in particular, concerning the technical licence conditions for the Relevant Spectrum) and, in particular, ComReg documents 19/59c, 19/124c and 20/122b;
- iii. the powers, functions, objectives and duties of ComReg, including, without limitation those under and by virtue of:
 - a) the Communications Regulation Act 2002, and, in particular, sections 10, 12 and 13 thereof;
 - b) the Framework Regulations, and, in particular, Regulations 13, 16 and 17 thereof;
 - c) the Authorisation Regulations, and, in particular, Regulations 9, 10, 11, 12, 15, 16, 17, 18(1)(c) and 19 thereof;
 - d) the 2.1 GHz Band EC Decision;
 - e) the 2.6 GHz Band EC Decision;
 - f) the 700 MHz EC Decision;
 - g) Sections 5 and 6 of the Wireless Telegraphy Act, 1926; and
 - h) the applicable Policy Directions made by the Minister under section 13 of the Communications Regulation Act 2002,

and, noting that it has:

- i) given all interested parties the opportunity to express their views and make their submissions in accordance with Regulation 11 of the Authorisation Regulations and Regulation 12 of the Framework Regulations.

3. DECISIONS

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

- i. subject to obtaining the consent of the Minister to the making by it of the Further Temporary ECS Licence Regulations (No. 3), to make those regulations under section 6 of the Wireless Telegraphy Act 1926, prescribing relevant matters in relation to Further Temporary ECS Licences

(No. 3), including prescribing the form of the licences concerned, their duration and the conditions and restrictions subject to which they are granted;

700MHz Duplex and 2.1GHz Bands

- ii. upon application properly being made to it by MNOs for Further Temporary ECS Licences (No. 3) with rights of use in the 700 MHz Duplex and 2.1 GHz Bands;
 - a) to select which MNOs will be granted Further Temporary ECS Licences (No. 3) in the 700 MHz Duplex and 2.1 GHz bands having regard to the principles generally described in Chapter 4 of Document 21/87 and further particularised in the Further Temporary ECS Licence Regulations (No. 3), as made, and the material provided by applicants in support of their respective application, including the ability of the applicant to deliver services expeditiously using those rights of use; to assign 2 x 10 MHz of 700 MHz Duplex to each MNO³¹, but where ComReg reserves the right to make alternative assignments in line with its statutory objectives and duties;
 - b) to grant Further Temporary ECS Licences (No. 3), under section 5 of the Wireless Telegraphy Act 1926 to such MNOs for the periods, and subject to the conditions and restrictions (including conditions as to suspension and withdrawal), prescribed in the Further Temporary ECS Licence Regulations (No. 3), including Schedule 1 of same, as currently set out in draft form in Annex 4 of Document 21/96;

2.6 GHz Band

- iii. upon application properly being made to it by an Undertaking for Further Temporary ECS Licences (No. 3) in respect of 2.6 GHz Band Blocks, and following consultation with the Irish Aviation Authority;
 - a) to select which MNOs will be granted Further Temporary ECS Licences (No. 3) with 2.6 GHz Band Blocks having regard to the principles generally described in Chapter 4 of Document 21/87 and further particularised in the Further Temporary ECS Licence

³¹ Specifically:

- Eir: 703 to 713 MHz paired with 758 to 768 MHz;
- Three: 713 to 723 paired with 768 to 778 MHz; and
- Vodafone: 723 to 733 paired with 778 to 788 MHz.

Regulations (No. 3), as made, and the material provided by applicants in support of their respective application; in particular, the proposed location of sites and confirmation that they will comply with the requirement to protect Aeronautical Primary Radars, if the aggregate demand for 2.6 GHz Band Blocks exceeds the amount available, ComReg shall decide the number of 2.6 GHz Band Blocks (if any) to award to each applicant, based on, among other things, the ability of the applicant to deliver services expeditiously using those rights of use;

- b) to grant Further Temporary ECS Licences (No. 3), under section 5 of the Wireless Telegraphy Act 1926 to such MNOs, where spectrum rights shall be assigned on a site by site basis, for the periods, and subject to the conditions and restrictions (including conditions as to suspension and withdrawal), prescribed in the Further Temporary ECS Licence Regulations (No. 3), including Schedule 1 of same, as currently set out in draft form in Annex 4 of Document 21/96;
- c) to consider applications for the addition of sites to a Further Temporary ECS Licence (No. 3) granted in respect of rights of use in the 2.6 GHz Band Blocks from time to time on a first come, first served basis;

Licence Duration

- iv. to make the duration of a Further Temporary ECS Licence (No. 3) up to but no longer than 3 calendar months;
- v. upon application properly being made to it, having regard to the principles generally described in Chapter 4 of Document 21/87 and further particularised in the Further Temporary ECS Licence Regulations (No. 3), and the material provided by applicants in support of their renewal, to renew a Further Temporary ECS Licence (No. 3) for a further period of up to but no longer than 3 calendar months; and
- vi. that any Second Further Temporary ECS Licence granted or renewed shall in any event expire no later than 1 April 2022.

4. STATUTORY POWERS NOT AFFECTED

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

Chapter 6

6 Next steps

- 6.1 Document 21/96a published alongside this document contains an Application Form for a Further Temporary ECS Licence (No.3). This will be published on ComReg's website as an editable PDF file.
- 6.2 ComReg intends, in the coming days, to seek the consent of the Minister for Environment, Climate and Communications to make the Further Temporary ECS Licence Regulations (No.3).
- 6.3 Applicants can submit a completed Application Form to ComReg (together with supporting information and payment of the applicable fee) to the email address below as soon as ready. ComReg will process applications once the Further Temporary ECS Licence Regulations (No.3) are made.
- 6.4 Applicants should send their completed Application Form to:

licensing@comreg.ie

with the subject line: **Further Temporary ECS Licence (No.3)**

- 6.5 If ComReg receives correspondence on matters relating to this document and the consultation process generally, ComReg hereby gives notice that it will publish all material correspondence received in this regard subject to the provisions of ComReg's guidelines on the treatment of confidential information³².

³² ComReg Document 05/24 - Response to Consultation - Guidelines on the treatment of confidential information – Published 22 March 2005.

Annex: 1 Glossary

A1.1 Definitions

- A 1.1 The definitions in this glossary shall apply to this document as a whole.
- A 1.2 Where a term in this glossary is defined by reference to a definition in a section or paragraph and an explanation of that term is provided in this glossary, the latter explanation is for convenience only and reference should be made to the appropriate part of the document for the definitive meaning of that term in its appropriate context.
- A 1.3 Any reference to any provision of any legislation shall include any modification re-enactment or extension thereof.
- A 1.4 Terms defined in this consultation paper shall, unless the context otherwise requires or admits, have the meaning set out below:

3.6 GHz Band	The radio frequency spectrum in the range 3400 MHz to 3800 MHz.
700 MHz Duplex	The frequency range 703-733 MHz paired with 758-788 MHz.
2.1 GHz Band	The frequency ranges 1920-1980 MHz paired with 2110-2170 MHz
2.6 GHz Band	The frequency range 2500 – 2690 MHz.
Aeronautical Primary Radars	Means apparatus (including “Star 2000” and “TA10” models) providing primary aircraft detection used in airport surveillance networks at Dublin, Cork and Shannon airports.
Application Form	ComReg Document 21/96a.
COVID-19	COVID-19 is an illness that can affect your lungs and airways and is caused by a virus called SARS-CoV-2 (2019-nCoV) coronavirus.

Existing Temporary Licensing Framework	ECS	Means the Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) (No.2) Regulations 2021 (S.I. No. 137 of 2021).
Further Temporary Licence Regulations (No.2)	ECS	Means the regulations as set out in S.I 137 of 2021.
Further Temporary Licence Regulations (No.3)	ECS	Means the draft regulations as set out in Annex 4 of this document
IM		The Information Memorandum ComReg published in Document 21/40 (as may be amended) detailing the processes and procedures ComReg is employing in conducting the MBSA2.
MBSA2		ComReg's Multi-Band Spectrum Award project for the long-term assignment of spectrum rights of use in the 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz bands Further information is available on ComReg's Spectrum Awards webpage at www.comreg.ie
MBSA2 Decision		Decision D11/20 as published in Document 20/122.
Proposed Approach		ComReg's consideration of the approach as set out in this Document.
Temporary Situation		Means the temporary and extraordinary situation currently presented by COVID-19 and the increased traffic demands placed on wireless networks arising from the Government measures to address same.

A1.2 European and Governmental Bodies, Regulatory and Standardisation Organisations

ComReg	Commission for Communications Regulation
DECC	Department of the Environment, Climate and Communications
EC	European Commission
EU	European Union
IAA	Irish Aviation Authority
ITU	International Telecommunication Union

A1.3 Primary and Secondary Legislation and EC Decisions

S.I.	Statutory Instrument
EC Decision 2008/477/EC	European Commission Decision on the harmonisation of the 2500 - 2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community as amended by European Commission Decision 2020/636/EU ³³

A1.4 Glossary of Technical Terms

3G	Third Generation Mobile System (e.g. UMTS)
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³³ Commission Implementing Decision (EU) 2020/636 of 8 May 2020 amending Decision 2008/477/EC as regards an update of relevant technical conditions applicable to the 2500 – 2690 MHz frequency band.

ECS	Electronic Communications Service as defined under the Framework Regulations
GHz	Gigahertz (1 000 000 000 Hertz)
Hertz	Unit of Frequency
kHz	Kilohertz (1 000 Hertz)
LTE	Long Term Evolution of 3G
MHz	Megahertz (1 000 000 Hertz)
MNO	Mobile Network Operator
UMTS	Universal Mobile Telecommunications System.

Annex: 2 Legal Framework and Statutory Objectives

- A 2.1 The Communications Regulation Act 2002 (as amended by the Communications Regulation (Amendment) Act 2007) (the “2002 Act”), the EU Common Regulatory Framework (including the Framework and Authorisation Directives³⁴ as transposed into Irish law by the corresponding Framework and Authorisation Regulations³⁵), and the Wireless Telegraphy Acts 1926 to 2009³⁶ set out, amongst other things, powers, functions, duties and objectives of ComReg that are relevant to the management of the radio frequency spectrum in Ireland and to this consultation document.
- A 2.2 Apart from licensing and making regulations in relation to licences, ComReg’s functions include the management of Ireland’s radio frequency spectrum in accordance with ministerial Policy Directions under section 13 of the 2002 Act, having regard to its objectives under section 12 of the 2002 Act, Regulation 16 of the Framework Regulations and the provisions of Article 8a of the Framework Directive. ComReg is to carry out its functions effectively, and in a manner serving to ensure that the allocation and assignment of radio frequencies is based on objective, transparent, non-discriminatory and proportionate criteria.
- A 2.3 This annex is intended as a general guide as to ComReg’s role in this area, and not as a definitive or exhaustive legal exposition of that role. Further, this annex restricts itself to consideration of those powers, functions, duties and objectives of ComReg that appear most relevant to the matters at hand and generally excludes those not considered relevant (for example, in relation to postal services, premium rate services or market analysis). For the avoidance of doubt, however, the inclusion of particular material in this annex does not necessarily mean that ComReg considers same to be of specific relevance to the matters at hand.

³⁴ Directive No. 2002/21/EC of the European Parliament and of the Council of 7 March 2002 (as amended by Regulation (EC) No. 717/2007 of 27 June 2007, Regulation (EC) No. 544/2009 of 18 June 2009 and Directive 2009/140/EC of the European Parliament and Council of 25 November 2009) (the “Framework Directive”) and Directive No. 2002/20/EC of the European Parliament and of the Council of 7 March 2002 (as amended by Directive 2009/140/EC) (the “Authorisation Directive”).

³⁵ The European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) and the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011) respectively.

³⁶ The Wireless Telegraphy Acts 1926 to 1988 and Sections 181 (1) to (7) and (9) and Section 182 of the Broadcasting Act 2009.

A 2.4 All references in this annex to enactments are to the enactment as amended at the date hereof, unless the context otherwise requires.

New European Electronic Communications Code

A 2.5 On 20 December 2018, Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (“EECC”) entered into force. The EECC replaces the EU Common Regulatory Framework adopted in 2002 (and amended in 2009) under which ComReg has regulated electronic communications since 2003.

A 2.6 With some limited exceptions (see Article 124 of the EECC), Member States had until 21 December 2020 to transpose the EECC into national law³⁷. The DECC is responsible for the transposition of the EECC and ComReg has assisted the DECC in that regard as appropriate.

A 2.7 ComReg understands that the EECC is unlikely to be transposed into national law until at least Q4 2021. However, for the avoidance of doubt, electronic communications providers must continue to comply with their obligations, ComReg will continue to regulate the electronic communications sector under its existing powers, and redress mechanisms for customers will continue unchanged until new legislation is introduced.

A 2.8 Notwithstanding, and for the avoidance of doubt, ComReg is satisfied that, to the best of its knowledge, the granting of Temporary ECS Licences for the purposes of the Temporary Situation, and under the conditions described in this document, would not conflict with the objectives of the EECC or the obligations likely to be imposed on ComReg under national legislation implementing same.

A2.1 Primary Objectives and Regulatory Principles under the 2002 Act and Common Regulatory Framework

A 2.9 ComReg’s primary objectives in carrying out its statutory functions in the context of electronic communications are to:

- promote competition³⁸;
- contribute to the development of the internal market³⁹;

³⁷ With the exception of Articles 53(2), (3) and (4), and Article 54 (See Article 124).

³⁸ Section 12 (1)(a)(i) of the 2002 Act.

³⁹ Section 12 (1)(a)(ii) of the 2002 Act.

- promote the interests of users within the Community⁴⁰;
- ensure the efficient management and use of the radio frequency spectrum in Ireland in accordance with a direction under section 13 of the 2002 Act⁴¹; and
- unless otherwise provided for in Regulation 17 of the Framework Regulations, take the utmost account of the desirability of technological neutrality in complying with the requirements of the Specific Regulations⁴² in particular those designed to ensure effective competition⁴³.

A2.1.1 Promotion of Competition

A 2.10 Section 12(2)(a) of the 2002 Act requires ComReg to take all reasonable measures which are aimed at the promotion of competition, including:

- ensuring that users, including disabled users, derive maximum benefit in terms of choice, price and quality;
- ensuring that there is no distortion or restriction of competition in the electronic communications sector; and
- encouraging efficient use and ensuring the effective management of radio frequencies and numbering resources.

A 2.11 In so far as the promotion of competition is concerned, Regulation 16(1)(b) of the Framework Regulations also requires ComReg to:

- ensure that elderly users and users with special social needs derive maximum benefit in terms of choice, price and quality, and

⁴⁰ Section 12(1)(a)(iii) of the 2002 Act.

⁴¹ Section 12(1)(b) of the 2002 Act. Whilst this objective would appear to be a separate and distinct objective in the 2002 Act, it is noted that, for the purposes of ComReg's activities in relation to electronic communications networks and services ("ECN" and "ECS"), Article 8 of the Framework Directive identifies "*encouraging efficient use and ensuring the effective management of radio frequencies (and numbering resources)*" as a sub-objective of the broader objective of the promotion of competition.

⁴² The 'Specific Regulations' comprise collectively the Framework Regulations, the Authorisation Regulations, the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011), the European Communities (Electronic Communications Networks and Services) (Universal Service and Users' Rights) Regulations 2011 (S.I. 337 of 2011) and the European Communities (Electronic Communications Networks and Services) (Privacy and Electronic Communications) Regulations 2011 (S.I. No. 336 of 2011).

⁴³ Regulation 16(1)(a) of the Framework Regulations.

- ensure that, in the transmission of content, there is no distortion or restriction of competition in the electronic communications sector.

A 2.12 Regulation 9(11) of the Authorisation Regulations also provides that ComReg must ensure that radio frequencies are efficiently and effectively used having regard to section 12(2)(a) of the 2002 Act and Regulations 16(1) and 17(1) of the Framework Regulations. Regulation 9(11) further provides that ComReg must ensure that competition is not distorted by any transfer or accumulation of rights of use for radio frequencies and, for this purpose, ComReg may take appropriate measures such as mandating the sale or the lease of rights of use for radio frequencies.

A2.1.2 Contributing to the Development of the Internal Market

A 2.13 Section 12(2)(b) of the 2002 Act requires ComReg to take all reasonable measures which are aimed at contributing to the development of the internal market, including:

- removing remaining obstacles to the provision of ECN, ECS and associated facilities at Community level;
- encouraging the establishment and development of trans-European networks and the interoperability of transnational services and end-to-end connectivity; and
- co-operating with electronic communications national regulatory authorities in other Member States of the Community and with the Commission of the Community in a transparent manner to ensure the development of consistent regulatory practice and the consistent application of Community law in this field.

A 2.14 In so far as contributing to the development of the internal market is concerned, Regulation 16(1)(c) of the Framework Regulations also requires ComReg to co-operate with the Body of European Regulators for Electronic Communications (“BEREC”) in a transparent manner to ensure the development of consistent regulatory practice and the consistent application of EU law in the field of electronic communications.

A2.1.3 Promotion of Interests of Users

A 2.15 Section 12(2)(c) of the 2002 Act requires ComReg, when exercising its functions in relation to the provision of electronic communications networks and services, to take all reasonable measures which are aimed at the promotion of the interests of users within the Community, including:

- ensuring that all users have access to a universal service;
- ensuring a high level of protection for consumers in their dealings with suppliers, in particular by ensuring the availability of simple and inexpensive dispute resolution procedures carried out by a body that is independent of the parties involved;
- contributing to ensuring a high level of protection of personal data and privacy;
- promoting the provision of clear information, in particular requiring transparency of tariffs and conditions for using publicly available ECS;
- encouraging access to the internet at reasonable cost to users;
- addressing the needs of specific social groups, in particular disabled users; and
- ensuring that the integrity and security of public communications networks are maintained.

A 2.16 In so far as promotion of the interests of users within the EU is concerned, Regulation 16(1)(d) of the Framework Regulations also requires ComReg to:

- address the needs of specific social groups, in particular, elderly users and users with special social needs, and
- promote the ability of end-users to access and distribute information or use applications and services of their choice.

A2.1.4 Regulatory Principles

A 2.17 In pursuit of its objectives under Regulation 16(1) of the Framework Regulations and section 12 of the 2002 Act, ComReg must apply objective, transparent, non-discriminatory and proportionate regulatory principles by, amongst other things:

- promoting regulatory predictability by ensuring a consistent regulatory approach over appropriate review periods;
- ensuring that, in similar circumstances, there is no discrimination in the treatment of undertakings providing ECN and ECS;
- safeguarding competition to the benefit of consumers and promoting, where appropriate, infrastructure-based competition;

- promoting efficient investment and innovation in new and enhanced infrastructures, including by ensuring that any access obligation takes appropriate account of the risk incurred by the investing undertakings and by permitting various cooperative arrangements between investors and parties seeking access to diversify the risk of investment, while ensuring that competition in the market and the principle of non-discrimination are preserved;
- taking due account of the variety of conditions relating to competition and consumers that exist in the various geographic areas within the State; and
- imposing ex-ante regulatory obligations only where there is no effective and sustainable competition and relaxing or lifting such obligations as soon as that condition is fulfilled.

A2.1.5 Other Obligations under the 2002 Act **A2.1.6 Other Obligations under the 2002 Act**

A 2.18 In carrying out its functions, ComReg is required, amongst other things, to:

- seek to ensure that any measures taken by it are proportionate having regard to the objectives set out in section 12 of the 2002 Act;⁴⁴
- have regard to international developments with regard to the radio frequency spectrum⁴⁵; and
- take the utmost account of the desirability that the exercise of its functions aimed at achieving its radio frequency management objectives does not result in discrimination in favour of or against particular types of technology for the provision of ECS.⁴⁶

A2.1.6 Policy Directions⁴⁷

A 2.19 Section 12(4) of the 2002 Act provides that, in carrying out its functions, ComReg must have appropriate regard to policy statements, published by or on behalf of the Government or a Minister of the Government and notified to the Commission, in relation to the economic and social development of the State.

⁴⁴ Section 12(3) of the 2002 Act.

⁴⁵ Section 12(5) of the 2002 Act.

⁴⁶ Section 12(6) of the 2002 Act.

⁴⁷ ComReg also notes, and takes due account of, the Spectrum Policy Statement issued by the Department of Communications Energy and Natural Resources in September 2010.

Section 13(1) of the 2002 Act requires ComReg to comply with any policy direction given to ComReg by the Minister for Communications, Energy and Natural Resources (“the Minister”) as he or she considers appropriate, in the interests of the proper and effective regulation of the electronic communications market, the management of the radio frequency spectrum in the State and the formulation of policy applicable to such proper and effective regulation and management, to be followed by ComReg in the exercise of its functions. Section 10(1)(b) of the 2002 Act also requires ComReg, in managing the radio frequency spectrum, to do so in accordance with a direction of the Minister under section 13 of the 2002 Act, while Section 12(1)(b) requires ComReg to ensure the efficient management and use of the radio frequency spectrum in accordance with a direction under Section 13.

A 2.20 The Policy Directions which are most relevant in this regard include the following:

Policy Direction No.3 on Broadband Electronic Communication Networks

A 2.21 ComReg shall in the exercise of its functions, take into account the national objective regarding broadband rollout, viz, the Government wishes to ensure the widespread availability of open-access, affordable, always-on broadband infrastructure and services for businesses and citizens on a balanced regional basis within three years, on the basis of utilisation of a range of existing and emerging technologies and broadband speeds appropriate to specific categories of service and customers.

Policy Direction No.4 on Industry Sustainability

A 2.22 ComReg shall ensure that in making regulatory decisions in relation to the electronic communications market, it takes account of the state of the industry and in particular the industry’s position in the business cycle and the impact of such decisions on the sustainability of the business of undertakings affected.

Policy Direction No.5 on Regulation only where necessary

A 2.23 Where ComReg has discretion as to whether to impose regulatory obligations, it shall, before deciding to impose such regulatory obligations on undertakings, examine whether the objectives of such regulatory obligations would be better achieved by forbearance from imposition of such obligations and reliance instead on market forces.

Policy Direction No.6 on Regulatory Impact Assessment

A 2.24 ComReg, before deciding to impose regulatory obligations on undertakings in the market for electronic communications or for the purposes of the

management and use of the radio frequency spectrum or for the purposes of the regulation of the postal sector, shall conduct a Regulatory Impact Assessment in accordance with European and International best practice and otherwise in accordance with measures that may be adopted under the Government's Better Regulation programme.

Policy Direction No.7 on Consistency with other Member States

- A 2.25 ComReg shall ensure that, where market circumstances are equivalent, the regulatory obligations imposed on undertakings in the electronic communications market in Ireland should be equivalent to those imposed on undertakings in equivalent positions in other Member States of the European Community.

Policy Direction No.11 on the Management of the Radio Frequency Spectrum

- A 2.26 ComReg shall ensure that, in its management of the radio frequency spectrum, it takes account of the interests of all users of the radio frequency spectrum.

General Policy Direction No.1 on Competition (2004)

- A 2.27 ComReg shall focus on the promotion of competition as a key objective. Where necessary, ComReg shall implement remedies which counteract or remove barriers to market entry and shall support entry by new players to the market and entry into new sectors by existing players. ComReg shall have a particular focus on:

- market share of new entrants;
- ensuring that the applicable margin attributable to a product at the wholesale level is sufficient to promote and sustain competition;
- price level to the end user;
- competition in the fixed and mobile markets; and
- the potential of alternative technology delivery platforms to support competition

A2.2 Other Relevant Obligations under the Framework and Authorisation Regulations

A2.2.1 Framework Regulations

Regulation 17

A 2.28 Regulation 17 of the Framework Regulations governs the management of radio frequencies for ECS. Regulation 17(1) requires that ComReg, subject to any directions issued by the Minister pursuant to Section 13 of the 2002 Act and having regard to its objectives under Section 12 of the 2002 Act and Regulation 16 of the Framework Regulations and the provisions of Article 8a of the Framework Directive, ensure:

- the effective management of radio frequencies for ECS;
- that spectrum allocation used for ECS and issuing of general authorisations or individual rights of use for such radio frequencies are based on objective, transparent, non-discriminatory and proportionate criteria; and
- ensure that harmonisation of the use of radio frequency spectrum across the EU is promoted, consistent with the need to ensure its effective and efficient use and in pursuit of benefits for the consumer such as economies of scale and interoperability of services, having regard to all decisions and measures adopted by the European Commission in accordance with Decision No. 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the EU.

A 2.29 Regulation 17(2) provides that, unless otherwise provided in Regulation 17(3), ComReg must ensure that all types of technology used for ECS may be used in the radio frequency bands that are declared available for ECS in the Radio Frequency Plan published under Section 35 of the 2002 Act in accordance with EU law.

A 2.30 Regulation 17(3) provides that, notwithstanding Regulation 17(2), ComReg may, through licence conditions or otherwise, provide for proportionate and non-discriminatory restrictions to the types of radio network or wireless access technology used for ECS where this is necessary to:

- avoid harmful interference;
- protect public health against electromagnetic fields;

- ensure technical quality of service;
- ensure maximisation of radio frequency sharing;
- safeguard the efficient use of spectrum; or
- ensure the fulfilment of a general interest objective as defined by or on behalf of the Government or a Minister of the Government in accordance with Regulation 17(6).

A 2.31 Regulation 17(4) requires that, unless otherwise provided in Regulation 17(5), ComReg must ensure that all types of ECS may be provided in the radio frequency bands, declared available for ECS in the Radio Frequency Plan published under Section 35 of the Act of 2002 in accordance with EU law.

A 2.32 Regulation 17(5) provides that, notwithstanding Regulation 17(4), ComReg may provide for proportionate and non-discriminatory restrictions to the types of ECS to be provided, including where necessary, to fulfil a requirement under the International Telecommunication Union Radio Regulations (“ITU-RR”).

A 2.33 Regulation 17(6) requires that measures that require an ECS to be provided in a specific band available for ECS must be justified in order to ensure the fulfilment of a general interest objective as defined by or on behalf of the Government or a Minister of the Government in conformity with EU law such as, but not limited to:

- safety of life;
- the promotion of social, regional or territorial cohesion;
- the avoidance of inefficient use of radio frequencies; or
- the promotion of cultural and linguistic diversity and media pluralism, for example, by the provision of radio and television broadcasting services.

A 2.34 Regulation 17(7) provides that ComReg may only prohibit the provision of any other ECS in a specific radio spectrum frequency band where such a prohibition is justified by the need to protect safety of life services. ComReg may, on an exceptional basis, extend such a measure in order to fulfil other general interest objectives as defined by or on behalf of the Government or a Minister of the Government.

A 2.35 Regulation 17(8) provides that ComReg must, in accordance with Regulation 18, regularly review the necessity of the restrictions referred to in Regulations

17(3) and 17(5) and must make the results of such reviews publicly available.

- A 2.36 Regulation 17(9) provides that Regulations 17(2) to (7) only apply to spectrum allocated to be used for ECS, general authorisations issued and individual rights of use for radio frequencies granted after 1 July 2011. Spectrum allocations, general authorisations and individual rights of use which already existed on 1 July 2011 are subject to Regulation 18 of the Framework Regulations.
- A 2.37 Regulation 17(10) provides that ComReg may, having regard to its objectives under Section 12 of the 2002 Act and Regulation 16 and its functions under the Specific Regulations, lay down rules in order to prevent spectrum hoarding, in particular by setting out strict deadlines for the effective exploitation of the rights of use by the holder of rights and by withdrawing the rights of use in cases of non-compliance with the deadlines. Any rules laid down under this Regulation must be applied in a proportionate, non-discriminatory and transparent manner.
- A 2.38 Regulation 17(11) requires ComReg to, in the fulfilment of its obligations under that Regulation, respect relevant international agreements, including the ITU-RR and any public policy considerations brought to its attention by the Minister.

Decision to limit rights of use for radio frequencies

- A 2.39 Regulation 9(2) of the Authorisation Regulations provides that ComReg may grant individual rights of use for radio frequencies by way of a licence where it considers that one or more of the following criteria are applicable:
- it is necessary to avoid harmful interference;
 - it is necessary to ensure technical quality of service;
 - it is necessary to safeguard the efficient use of spectrum; or
 - it is necessary to fulfil other objectives of general interest as defined by or on behalf of the Government or a Minister of the Government in conformity with EU law.
- A 2.40 Regulation 9(10) of the Authorisation Regulations provides that ComReg must not limit the number of rights of use for radio frequencies to be granted except where this is necessary to ensure the efficient use of radio frequencies in accordance with Regulation 11.
- A 2.41 Regulation 9(7) also provides that:
- where individual rights of use for radio frequencies are granted for a period of 10 years or more and such rights may not be transferred or

leased between undertakings in accordance with Regulation 19 of the Framework Regulations, ComReg must ensure that criteria set out in Regulation 9(2) apply for the duration of the rights of use, in particular upon a justified request from the holder of the right.

- where ComReg determines that the criteria referred to in Regulation 9(2) are no longer applicable to a right of use for radio frequencies, ComReg must, after a reasonable period and having notified the holder of the individual rights of use, change the individual rights of use into a general authorisation or must ensure that the individual rights of use are made transferable or leasable between undertakings in accordance with Regulation 19 of the Framework Regulations.

Publication of procedures

- A 2.42 Regulation 9(4)(a) of the Authorisation Regulations requires that ComReg, having regard to the provisions of Regulation 17 of the Framework Regulations, establish open, objective, transparent, non-discriminatory and proportionate procedures for the granting of rights of use for radio frequencies and cause any such procedures to be made publicly available.

Duration of rights of use for radio frequencies

- A 2.43 Regulation 9(6) of the Authorisation Regulations provides that rights of use for radio frequencies must be in force for such period as ComReg considers appropriate having regard to the network or service concerned in view of the objective pursued taking due account of the need to allow for an appropriate period for investment amortisation.

Conditions attached to rights of use for radio frequencies

- A 2.44 Regulation 9(5) of the Authorisation Regulations provides that, when granting rights of use for radio frequencies, ComReg must, having regard to the provisions of Regulations 17 and 19 of the Framework Regulations, specify whether such rights may be transferred by the holder of the rights and under what conditions such a transfer may take place.
- A 2.45 Regulation 10(1) of the Authorisation Regulations provides that, notwithstanding Section 5 of the Wireless Telegraphy Act, 1926, but subject to any regulations under Section 6 of that Act, ComReg may only attach those conditions listed in Part B of the Schedule to the Authorisation Regulations. Part B lists the following conditions which may be attached to rights of use:

- Obligation to provide a service or to use a type of technology for which the rights of use for the frequency has been granted including, where appropriate, coverage and quality requirements.
- Effective and efficient use of frequencies in conformity with the Framework Directive and Framework Regulations.
- Technical and operational conditions necessary for the avoidance of harmful interference and for the limitation of exposure of the general public to electromagnetic fields, where such conditions are different from those included in the general authorisation.
- Maximum duration in conformity with Regulation 9, subject to any changes in the national frequency plan.
- Transfer of rights at the initiative of the rights holder and conditions of such transfer in conformity with the Framework Directive.
- Usage fees in accordance with Regulation 19.
- Any commitments which the undertaking obtaining the usage right has made in the course of a competitive or comparative selection procedure.
- Obligations under relevant international agreements relating to the use of frequencies.
- Obligations specific to an experimental use of radio frequencies.

A 2.46 Regulation 10(2) also requires that any attachment of conditions under Regulation 10(1) to rights of use for radio frequencies must be non-discriminatory, proportionate and transparent and in accordance with Regulation 17 of the Framework Regulations.

Procedures for limiting the number of rights of use to be granted for radio frequencies

A 2.47 Regulation 11(1) of the Authorisation Regulations provides that, where ComReg considers that the number of rights of use to be granted for radio frequencies should be limited it must, without prejudice to Sections 13 and 37 of the 2002 Act:

- give due weight to the need to maximise benefits for users and to facilitate the development of competition, and

- give all interested parties, including users and consumers, the opportunity to express their views in accordance with Regulation 12 of the Framework Regulations.

A 2.48 Regulation 11(2) of the Authorisation Regulations requires that, when granting the limited number of rights of use for radio frequencies it has decided upon, ComReg does so “...on the basis of selection criteria which are objective, transparent, non-discriminatory and proportionate and which give due weight to the achievement of the objectives set out in Section 12 of the 2002 Act and Regulations 16 and 17 of the Framework Regulations.”

A 2.49 Regulation 11(4) provides that where it decides to use competitive or comparative selection procedures, ComReg must, inter alia, ensure that such procedures are fair, reasonable, open and transparent to all interested parties.

Fees for spectrum rights of use

A 2.50 Regulation 19 of the Authorisation Regulations permits ComReg to impose fees for rights of use which reflect the need to ensure the optimal use of the radio frequency spectrum.

A 2.51 ComReg is required to ensure that any such fees are objectively justified, transparent, non-discriminatory and proportionate in relation to their intended purpose and take into account the objectives of ComReg as set out in Section 12 of the 2002 Act and Regulation 16 of the Framework Regulations.

Amendment of rights and obligations

A 2.52 Regulation 15 of the Authorisation Regulations permits ComReg to amend rights and conditions concerning rights of use, provided that any such amendments may only be made in objectively justified cases and in a proportionate manner, following the process set down in Regulation 15(4).

A2.3 Other Relevant Provisions

Wireless Telegraphy Act, 1926 (the “1926 Act”)

A 2.53 Under Section 5(1) of the 1926 Act, ComReg may, subject to that Act, and on payment of the prescribed fees (if any), grant to any person a licence to keep and have possession of apparatus for wireless telegraphy in any specified place in the State.

A 2.54 Section 5(2) provides that, such a licence shall be in such form, continue in force for such period and be subject to such conditions and restrictions (including conditions as to suspension and revocation) as may be prescribed in

regard to it by regulations made by ComReg under Section 6.

A 2.55 Section 5(3) also provides that, where it appears appropriate to ComReg, it may, in the interests of the efficient and orderly use of wireless telegraphy, limit the number of licences for any particular class or classes of apparatus for wireless telegraphy granted under Section 5.

A 2.56 Section 6 provides that ComReg may make regulations prescribing in relation to all licences granted by it under Section 5, or any particular class or classes of such licences, all or any of the following matters:

- the form of such licences;
- the period during which such licences continue in force;
- the manner in which, the terms on which, and the period or periods for which such licences may be renewed;
- the circumstances in which or the terms under which such licences are granted;
- the circumstances and manner in which such licences may be suspended or revoked by ComReg;
- the terms and conditions to be observed by the holders of such licences and subject to which such licences are deemed to be granted;
- the fees to be paid on the application, grant or renewal of such licences or classes of such licences, subject to such exceptions as ComReg may prescribe, and the time and manner at and in which such fees are to be paid; and
- matters which such licences do not entitle or authorise the holder to do.

A 2.57 Section 6(2) provides that Regulations made by ComReg under Regulation 6 may authorise and provide for the granting of a licence under Section 5 subject to special terms, conditions, and restrictions to persons who satisfy it that they require the licences solely for the purpose of conducting experiments in wireless telegraphy.

A 2.58 Regulation 10(1) of the Authorisation Regulations provides that, notwithstanding section 5 of the Act of 1926 but subject to any regulations made under section 6 of that Act, where ComReg attaches conditions to rights of use for radio frequencies, it may only attach such conditions as are listed in Part B

of the Schedule to the Authorisation Regulations.

Article 4 of Directive 2002/77/EC (Competition Directive)

A 2.59 Article 4 of the Competition Directive provides that:

“Without prejudice to specific criteria and procedures adopted by Member States to grant rights of use of radio frequencies to providers of radio or television broadcast content services with a view to pursuing general interest objectives in conformity with Community law:

- *Member States shall not grant exclusive or special rights of use of radio frequencies for the provision of electronic communications services.*
- *The assignment of radio frequencies for electronic communication services shall be based on objective, transparent, non-discriminatory and proportionate criteria.”*

Annex: 3 Non-confidential submissions to Document 21/87

1 Eircom Limited and Meteor Mobile Communication Limited (trading as 'eir' and 'open eir'), collectively referred to as 'eir Group' or 'eir'

eir

Response to ComReg Consultation:

COVID-19: Temporary spectrum management measures

**Further temporary spectrum rights (No.3) in the 700 MHz Duplex, 2.1 GHz
and 2.6 GHz Bands**

ComReg Document 21/87



13 September 2021

DOCUMENT CONTROL

Document name	eir response to ComReg 21/87
Document Owner	eir
Status	Non-Confidential

The comments submitted in response to this consultation document are those of Eircom Limited and Meteor Mobile Communications Limited (trading as 'eir' and 'open eir'), collectively referred to as 'eir Group' or 'eir'.

Response to consultation

eir welcomes ComReg's proposal to create a third licensing regime for further temporary spectrum rights. The rationale for making available temporary spectrum rights is well presented in the consultation document. eir notes that "*ComReg expects that this will be its final proposal to put in place a further temporary licensing framework on the basis of the Temporary Situation*"¹. eir is pleased to note the progress that Ireland has made in response to the pandemic and the forthcoming further easing of restrictions. However we believe it is too early to conclude that no further temporary licensing frameworks may be required beyond April 2022.

ComReg's consideration of 21 October may be too binary. Whilst it is a landmark date much uncertainty still remains. The World Health Organisation expresses doubt that vaccines will end the pandemic in the near term through the risk unfortunately of the emergence of new variants and the resilience of vaccines that will require continued boosters. This would indicate that a return to life Pre Covid is unlikely to prevail from late 2021.

The milestone dates have been announced that will facilitate a return to office. However it is likely that many organisations will return staff on a phased basis. A number of organisations have also indicated there will be a shift towards hybrid models of working between office and home. This will likely be the new normal for many office based staff meaning that connectivity will be required both at homes and places of work in addition to commuter routes. This will result in more widespread continued demand for mobile services and availability of spectrum to support continued and growing data use and the full impact of this across the network will need to be understood.

In addition there is likely to be a significant continued requirement for home connectivity in the education sector. In the first two weeks of the current school term it is indicated that ~ 20K pupils were required to 'isolate' out of school premise and remote school through online means. The Universities have yet to return and may be operating with some degree of online tuition. This trend will unfortunately continue resulting in elevated demand for mobile services for these groups during the term times.

eir has experienced sustained data growth in 2021 with over 50% year on year growth, it is important that availability of spectrum is maximised for mobile operators to support continued demand. We note ComReg's observation that "*Eir is also eligible to apply for a Liberalised Use 2.1*

¹ Paragraph 1.2 of the consultation

GHz Band Licence and there are no impediments to Eir being granted same.”² eir does not agree. ComReg’s early liberalisation rules combined with the impact on timelines arising from the ongoing Three appeal mean that eir would be required to agree to an unknown liability in terms of the early liberalisation fee. The early liberalisation fee will be determined by the outcome of the auction and the extent of the liability will not be known until after the Three appeal has been concluded and the award subsequently completed.

We would also note that the timeline for the MBSA2 has seen continued delay and uncertainty through no action by eir, a failure to continue with a temporary spectrum allocation during a time of continued elevated demand would only benefit operators with existing significant spectrum holdings.

Finally, eir would like to take this opportunity to once again thank the ComReg officials for progressing consideration of the further licensing framework expeditiously.

² Paragraph 3.37

2 Imagine Communications Limited

From: Mike Stacey [REDACTED]
Sent: 16 September 2021 17:10
To: Patrick Bolton [REDACTED]; Market Framework Consult [REDACTED]
Cc: Brendan O'Brien [REDACTED] Joseph Coughlan [REDACTED]
Subject: Re: [Confidential] Submissions to ComReg 21/87

Hi Patrick,

Our non confidential response is:

I wish to inform you that Imagine supports the ComReg draft decisions in document 21/87 and as noted in section 2.3 hopes to secure further lease agreements with the MNO and DAI which we will inform ComReg of as soon as possible.

Kind regards

Mike

Mike Stacey

Imagine Group

Chief Technology and Innovation Officer
[REDACTED]

3 Three Ireland (Hutchison) Limited



Three Ireland (Hutchison) Limited.
Registered Office:
28/29 Sir John Rogerson's Quay,
Dublin 2, Ireland.

13th September 2021

Joseph Coughlan
Commission for Communications Regulation
1 Dockland Central
Guild Street
Dublin 1
D01 E4X0

Dear Joseph

Temporary Spectrum Measures – Document 21/87

Three notes that in document 21/87 ComReg responds to submissions from the three current mobile network operators requesting that the temporary spectrum measures are extended beyond 1st October 2021. ComReg's proposal is to provide for a further licensing process that is essentially similar to that currently in place and provides for possible extension of the temporary licences to April 2022 in two three-month periods.

As stated in our previous submission, we believe the temporary spectrum measures have been extremely important in allowing mobile networks respond to the changed patterns of behaviour that occurred in March and April last year. The main benefit has been to customers who received increased service quality in unusual times. Thankfully, we are emerging from the restrictions that were introduced to control the spread of Covid-19 and although we can expect that network traffic will return to more normal patterns, this has not completed yet and we must remain prepared for the impact that any future health protection measures might have on networks. Three agrees with ComReg's proposal to provide a further licensing scheme covering the period up to April 2022. This will allow mobile networks to continue to meet customer demands under what are "unusual times".

Yours Sincerely

Tom Hickey

4 Vodafone Ireland Limited



Non - Confidential Version

COVID-19: Temporary spectrum management measures

**Further temporary spectrum rights (No.3) in the 700 MHz Duplex, 2.1 GHz
and 2.6 GHz Bands**

Response to Consultation ComReg 21/87

Introduction

Vodafone are grateful for the opportunity to respond to **ComReg consultation 21/87. Further temporary spectrum rights (No.3) in the 700 MHz Duplex, 2.1 GHz and 2.6 GHz Bands.**

We wish to acknowledge the exceptional work ComReg have completed in working co-operatively with Mobile Operators throughout this crisis and in implementing these Temporary Measures.

In the introduction to this consultation ComReg recognise the challenges facing the Irish state in dealing with the on-going effect of a global pandemic.

The temporary measures implemented by ComReg in March 2020 have enabled mobile operators to provide telecommunications support to all their customers in Ireland throughout the period of significant change to work and social patterns that we have seen over the last 18 months.

As note in section 3.3.2 of ComReg's document, the withdrawal of certain COVID measures will be on a "phased and cautious basis appropriate to each sector", and specifically in 3.32 "it is not possible to estimate how long the phased implementation of the return-to-workplace policy will take". Our network is still experiencing changes in network traffic not foreseen pre Covid. Not only has demand for Mobile data services increased by much higher levels than forecast but the geographic spread of demand has changed considerable during this emergency. It is unknown when or indeed whether these traffic patterns will return to the pre-Covid distribution. For this reason, the extension of the Measures to 1 April 2022 is fully justified.

Using our Pre-Covid spectrum assignments, we could only add this additional capacity by building new radio sites; this cannot be done quickly enough to support the rapidly changing demand generated by changes in work practices, and other changes associated with COVID.

Forecast Traffic and effect of not extending the Spectrum Measures.

As we submitted to ComReg, we now expect the growth in demand for this year to very considerably in excess of that forecast pre-Covid.

Absent an extension of the Temporary Spectrum measures we would likely see a considerable increase in congested cells in the network and a degradation of service for all customers. Many customers would then experience congestion, resulting in reduced data rates or frequently interrupted data services.

Plan to use an Extension of the Temporary Measures.

To continue to provide an excellent service to customers, and to meet the challenges posed by changing locations and times of traffic, we have submitted to ComReg a detailed Radio plan to use these Temporary Measures.

Using 700 MHz spectrum at existing sites will significantly increase capacity in the most congested areas of the network. Sites in this band are particularly useful in rural areas where traffic has increased most significantly.

The MBSA

ComReg reiterates in paragraph 4.31 that the proposed Temporary ECS Licensing Framework is entirely without prejudice to the MBSA2, ComReg's Multi-Band Spectrum Award

We strongly agree with this position. Completing the MBSA2 is vital for support of long-term investment in telecommunications in Ireland. It will enable Vodafone to make long-term capital expenditure decisions, building additional coverage and bring new services to our customers. We see the completion of the auction as a facilitator for 5G, an important aspect of general economic and social development in Ireland for the foreseeable future.

We do note that in the longer term all operators will need to know the outcome of MBSA2 in order to plan and implement efficient investment and to effectively decide on the locations of new sites needed to replace the capacity provided by these Temporary Measures. This should be part of the consideration when deciding on any further measures post 1 April 2022.

Effect on competition

We note that, based on our joint request, ComReg assumes (in paragraph 3.53) that the MNOs are satisfied that "any further licensing framework implemented on such basis" would be unlikely to materially distort competition between them. On balance we agree that the current proposal to extend the Measures for a period of up to six months will not materially distort competition.

Supporting Other Telecommunications Providers.

All operators have continued to work co-operatively to ensure Temporary Measures introduced in April 2020 are implemented without generating interference to other communications services.

The additional network capacity released to mobile operators by these measures has also facilitated the leasing of 3.5GHz spectrum from Vodafone to Fixed Wireless operators, improving the services they can provide.

Conclusion

In conclusion we agree that ComReg are fully justified in extending these Temporary Spectrum measures for the further period proposed. Vodafone will apply for permission to use these measures and continue to add to their network to maintain excellent service for customers.

Annex: 4 Draft Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) (No. 3) Regulations



STATUTORY INSTRUMENTS.

S.I. No. of 2021

WIRELESS TELEGRAPHY (FURTHER TEMPORARY ELECTRONIC
COMMUNICATIONS SERVICES LICENCES) (NO. 3)
REGULATIONS2021

S.I. No. of 2021

WIRELESS TELEGRAPHY (FURTHER TEMPORARY ELECTRONIC
COMMUNICATIONS SERVICES LICENCES) (NO. 3)
REGULATIONS 2021

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

Citation

1. These Regulations may be cited as the Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) (No. 3) Regulations 2021.

Interpretation

2. (1) In these Regulations:

“2.1 GHz Band” means radio frequency spectrum in the range 1920 to 1980 MHz paired with radio frequency spectrum in the range 2110 to 2170 MHz;

“2.1 GHz Band Block” means a 5 MHz paired block of radio frequency spectrum in the 2.1 GHz Band;

“2.6 GHz Band” means radio frequency spectrum in the range 2500 to 2690 MHz;

“2.6 GHz Band FDD Frequency Generic Block” means a 5 MHz block of radio frequency spectrum in the range 2500 to 2570 MHz paired with a 5 MHz block of radio frequency spectrum in the range 2620 to 2690 MHz;

“2.6 GHz Band TDD Fixed Frequency Block (Lower)” means the 5 MHz unpaired block of radio frequency spectrum in the range 2570 to 2575 MHz;

“2.6 GHz Band TDD Fixed Frequency Block (Upper)” means a 5 MHz unpaired block of radio frequency spectrum in the range 2615 to 2620 MHz;

“2.6 GHz Band TDD Frequency Generic Block” means a 5 MHz unpaired block of radio frequency spectrum in the range 2575 to 2615 MHz;

“2.6 GHz Band Blocks” means the 2.6 GHz Band FDD Frequency Generic Blocks and the 2.6 GHz Band TDD Blocks;

“2.6 GHz Band TDD Blocks” means the 2.6 GHz Band TDD Fixed Frequency Block (Lower), 2.6 GHz Band TDD Fixed Frequency Block (Upper) and 2.6 GHz Band TDD Frequency Generic Blocks;

“700 MHz Duplex” means radio frequency spectrum in the range 703 to 733 MHz paired with radio frequency spectrum in the range 758 to 788 MHz;

“700 MHz Duplex Block” means a 5 MHz paired block of radio frequency spectrum in the 700 MHz Duplex;

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

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

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

“Apparatus” in relation to Licences means apparatus for wireless telegraphy as defined in section 2 of the Act of 1926 for terrestrial systems capable of providing Electronic Communications Services;

“Authorisation Regulations” means the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011);

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

“Decision of 2008” means European Commission Decision (2008/477/EC) of 13 June 2008 on the harmonisation of the 2500-2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community, as amended by European Commission Implementing Decision (EU) 2020/636 of 8 May 2020;

“Decision of 2012” means European Commission Implementing Decision (2012/688/EU) of 5 November 2012 on the harmonisation of the frequency bands 1920-1980 MHz and 2110-2170 MHz for terrestrial systems capable of providing electronic communications services in the Union, as amended by European Commission Implementing Decision (EU) 2020/667 of 6 May 2020;

“Decision of 2016” means European Commission Implementing Decision (EU) 2016/687 of 28 April 2016 on the harmonisation of the 694 -790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union;

“Electronic Communications Network” (“ECN”) and “Electronic Communications Service” (“ECS”) have the meanings assigned to them in the Framework Regulations;

“Equivalent Isotropically Radiated Power” (“EIRP”) means the product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna;

“FDD” means Frequency Division Duplex;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011);

“Further Temporary Electronic Communications Services Licence (No. 3)” means a Licence in the form set out in Schedule 1 to keep and have possession of Apparatus, in accordance with and subject to the terms and conditions set out therein;

“Harmful Interference” has the meaning set out in the Framework Regulations;

“Lease” means the assignment by a Licensee (“the Lessor”) of some or all of a right of use for radio frequencies granted under a Licence for a period less than the remaining duration of the right of use to another party (“the Lessee”), after which the right of use for radio frequencies reverts to the Lessor;

“Licence” means a non-exclusive licence granted under section 5 of the Act of 1926 in accordance with and subject to the matters prescribed in these Regulations to keep and have possession of Apparatus in a specified place in the State, being a Further Temporary Electronic Communications Services Licence (No. 3);

“Licence Commencement Date” means the date, as specified in the Licence, upon which the Licence comes into effect;

“Licensee” means the holder of a Licence;

“Non-exclusive”, in relation to a Licence, means that the Commission is not precluded from authorising the keeping and having possession by persons other than the Licensee, on a Non-Interference and Non-Protected Basis, of apparatus for wireless telegraphy for the radio frequency spectrum specified in the Licence;

“Non-Interference and Non-Protected Basis” means that the use of apparatus for wireless telegraphy is subject to no Harmful Interference being caused to any Radiocommunication Service, and that no claim may be made for the protection of apparatus for wireless telegraphy used on this basis against Harmful Interference originating from Radiocommunication Services;

“Radio Equipment Regulations” means the European Union (Radio Equipment) Regulations 2017 (S.I. No. 248 of 2017);

“Radiocommunication Service” means a service as defined in the Radio Regulations of the International Telecommunication Union involving the transmission, emission or reception of radio waves for specific telecommunication purposes;

“TDD” means Time Division Duplex;

“Transfer” has the meaning set out in the Transfer Regulations;

“Transfer Regulations” means the Wireless Telegraphy (Transfer of Spectrum Rights of Use) Regulations 2014 (S.I. No. 34 of 2014); and

“Undertaking” has the same meaning set out in the Framework Regulations.

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

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

(4) A word or expression that is used in these Regulations and that is also used in the Framework Regulations or in the Authorisation Regulations has, unless the context otherwise requires, the same meaning in these Regulations that it has in those Regulations.

Licences to which these Regulations apply

3. These Regulations apply to Further Temporary Electronic Communications Services Licences (No. 3).

Application for the Grant and Form of Licences

4. (1) Application for the grant of a Licence shall be made by an Undertaking to the Commission in writing and in such form as may be determined by the Commission from time to time.

(2) The Commission may grant a Licence, following payment by the applicant of the relevant fee prescribed in Regulation 8, in accordance with the Authorisation Regulations and having regard to, among other things:

- (a) available information regarding the extraordinary situation arising from COVID-19 and, in particular, as it may reasonably affect Electronic Communications Networks and the provision of relevant Electronic Communications Services in the State;
- (b) available information regarding the impact of the extraordinary situation arising from COVID-19 upon the capacity of the Electronic Communications Network operated by the Undertaking, including the locations in the State where any capacity constraints are occurring or are likely to occur;
- (c) available information regarding how the rights of use of radio frequencies applied for by the Undertaking would reasonably and materially assist in alleviating the capacity constraints identified in connection with sub-paragraph (b), including the lead time for the Undertaking to effectively make use of such rights of use of radio frequencies;
- (d) available information regarding the risks to the provision of existing Electronic Communications Services, and the quality of such existing provision, by the Undertaking in making changes to its Electronic Communications Network to effectively make use of the rights of use of radio frequencies applied for;
- (e) the need to encourage the efficient use and ensure the effective management of the radio frequency spectrum; and
- (f) the Commission's obligations and objectives in relation to competition for the provision of Electronic Communications Networks and Electronic Communications Services.

(3) An Undertaking who applies for the grant of a Licence shall furnish to the Commission such information as the Commission may reasonably require for the purposes of its functions under these Regulations, the Act of 1926, the

Framework Regulations and/or the Authorisation Regulations, and if the Undertaking, without reasonable cause, fails to comply with this paragraph, the Commission may refuse to grant the Licence concerned to the Undertaking.

(4) A Licence to which these Regulations apply shall be in the form specified in Schedule 1, with such variation, if any, whether by addition, deletion or alteration as the Commission may determine from time to time or in any particular case in accordance with the Authorisation Regulations.

Duration of Licences

5. (1) The commencement date and expiry date of a Licence shall be set by the Commission and specified in the Licence.

(2) The duration of any Licence granted under these Regulations shall be up to but no longer than three calendar months.

(3) Upon application properly being made in accordance with Regulation 4, the Commission may renew a Licence granted under these Regulations for a further period of up to but no longer than three calendar months.

(4) Any Licence granted or renewed under these Regulations shall expire no later than 1 April 2022.

Conditions of Licences

6. Any Licensee that is granted a Licence under these Regulations and to which these Regulations apply shall:

- (a) ensure that it complies with the conditions in its Licence and with these Regulations;
- (b) ensure that any Apparatus in the 700 MHz Duplex complies with the Decision of 2016, any Apparatus in the 2.1 GHz Band complies with the Decision of 2012, and any Apparatus in the 2.6 GHz Band complies with the Decision of 2008;
- (c) ensure that all Apparatus installed, maintained, possessed or kept under the Licence is capable of operating within the radio frequency spectrum specified in the Licence;
- (d) ensure that all Apparatus worked or used under the Licence is worked or used only in the radio frequency spectrum specified in the Licence;
- (e) ensure that it makes payment of the fee set out in and in accordance with Regulation 8;
- (f) furnish such information in respect of the Licence as may be requested by the Commission from time to time;
- (g) ensure that all Apparatus, or any part thereof, is installed, maintained, worked and used so as not to cause Harmful Interference;

- (h) ensure that all Apparatus, or any part thereof, complies with the Radio Equipment Regulations;
- (i) comply with any special conditions imposed under section 8 of the Act of 1972;
- (j) upon becoming aware of any event likely to materially affect its ability to comply with these Regulations, or any conditions set out or referred to in any Licence, notify the Commission of that fact in writing no later than 5 Working Days upon becoming aware;
- (k) comply with all obligations under relevant international agreements relating to the use of Apparatus or the frequencies to which they are assigned under a Licence; and
- (l) not Transfer or Lease any rights of use for radio frequencies attaching to a Licence.

Enforcement, Amendment, Suspension and Withdrawal

7. (1) Enforcement by the Commission of compliance by a Licensee with conditions attached to its Licence shall be in accordance with the Authorisation Regulations.

(2) The Commission may amend a Licence from time to time in accordance with the Authorisation Regulations having regard to, among other things, the factors set out in Regulation 4(2), and by giving the Licensee 5 days' notice in writing.

(3) The Commission may suspend or withdraw a Licence in accordance with the Authorisation Regulations.

Licence Fees

8. (1) The fee for a Licence, or renewal of a Licence, is €100 and is non-refundable.

(2) Any payment to be paid by a Licensee under this Regulation shall be made by way of banker's draft or such other means and on such other terms, if any, as the Commission may decide.

Licensee to satisfy all legal requirements

9. Licences granted pursuant to these Regulations do not grant to the Licensee any right, interest or entitlement other than to keep, have possession of, install, maintain, work and use Apparatus at a specified location or locations in the State.

SCHEDULE 1

WIRELESS TELEGRAPHY ACT, 1926

WIRELESS TELEGRAPHY (FURTHER TEMPORARY ELECTRONIC COMMUNICATIONS SERVICES LICENCES) (NO. 3) REGULATIONS 2021

Further Temporary Licence (No. 3) for terrestrial systems capable of providing Electronic Communications Services

Licence under section 5 of the Act of 1926 to keep and have possession of apparatus for wireless telegraphy for terrestrial systems capable of providing Electronic Communications Services.

The Commission for Communications Regulation, in exercise of the powers conferred on it by section 5 of the Act of 1926 hereby grants the following licence to **[LICENSEE NAME]** of **[LICENSEE ADDRESS]** (“the Licensee”).

The Licensee is hereby authorised to keep and have possession of apparatus for wireless telegraphy for terrestrial systems capable of providing Electronic Communications Services as specified in Part 2 of this Licence, subject to such apparatus being installed, maintained, worked and used in accordance with the terms, conditions and restrictions set out in the Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) (No. 3) Regulations 2021 (S.I. No. of 2021) (“the Regulations”), including but not limited to, the following:

(1) The Licensee shall ensure that it complies with all of the conditions contained within the Regulations and within Parts 1 to 4 of this Licence; and

(2) The Licensee shall ensure that it makes payment of the fee detailed in the Regulations.

For the purpose of this Licence, the definitions set out in the Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) (No. 3) Regulations 2021 apply.

This Licence shall come in to effect on **DD/MM/YYYY** (the “Licence Commencement Date”) and, subject to revocation, suspension or withdrawal, expires on **DD/MM/YYYY**.

Signed: _____

For and on behalf of the Commission for Communications Regulation

Date of Issue _____

Part 1

Commencement and expiry dates of Spectrum Blocks

Authorised Band	Name of Spectrum Block	Frequency Assigned to Spectrum Block	Commencement Date per Spectrum Block	Expiry Date per Spectrum Block
<i>700 MHz Duplex, 2.1 GHz, 2.6 GHz, as appropriate</i>	<i>Block A, B, C etc.</i>	<i>From ——— MHz to ——— MHz</i>	<i>DD Month YYYY</i>	<i>DD Month YYYY</i>

Part 2

The Apparatus to which this Licence applies

Authorised Band	Equipment Index Reference	Terrestrial System	Equipment Description	Manufacturer	Model
<i>700 MHz Duplex, 2.1 GHz, 2.6 GHz, as appropriate</i>					

Part 3

Apparatus Location and Details

Authorised Band	Site Identity	Eastings	Northings	Equipment Index Reference	Maximum EIRP/ TRP (dBm/5MHz)
<i>700 MHz Duplex, 2.1 GHz, 2.6 GHz as appropriate</i>					

Part 4

Licence Conditions

Section 1: General

Harmful Interference

1. In the event of Harmful Interference, the affected Licensees shall exchange information with a view to resolving the Harmful Interference by mutual consent. Where resolution cannot be agreed between the affected Licensees, the Commission may mediate in accordance with its statutory functions, objectives and duties.

Section 2: Technical Conditions

Definitions

1. The following additional definitions shall apply to this Licence:

“2RN” means RTÉ Transmission Network DAC (trading as 2rn);

“Active Antenna Systems” or “AAS” means a Base Station and an antenna system where the amplitude and/or phase between antenna elements is continually adjusted resulting in an antenna pattern that varies in response to short term changes in the radio environment. This excludes long-term beam shaping such as fixed electrical down tilt. In AAS Base Stations the antenna system is integrated as part of the Base Station system or product;

“Non-Active Antenna Systems” or “non-AAS” means a Base Station and an antenna system that provides one or more antenna connectors, which are connected to one or more separately designed passive antenna elements to radiate radio waves. The amplitude and phase of the signals to the antenna elements is not continually adjusted in response to short term changes in the radio environment;

“Aeronautical Primary Radars” means apparatus (including “Star2000” and “TA10” models) providing primary aircraft detection used in airport surveillance networks at Dublin, Cork and Shannon airports;

“Base Station” means Apparatus connected to a backhaul network which provides a Radiocommunication Service to Terminal Stations using spectrum in the 700 MHz Duplex, 2.1 GHz Band or 2.6 GHz Band;

“Block Edge Mask” or “BEM” is an emission mask that is defined as a function of frequency in relation to a ‘block edge’, the latter being the frequency boundary of a spectrum block for which rights of use are assigned to a Licensee. The BEM consists of several elements which are defined for certain measurement bandwidths.

“dBm” means decibels of power referenced to one milliwatt;

“Downlink” means transmissions from a Base Station to a Terminal Station;

“IAA” means the Irish Aviation Authority;

“Inter-Licensee Synchronisation Procedure” means the synchronisation procedure set out in Section 3 of this Licence;

“MNO” means a mobile network operator with an existing network in Ireland;

“Power Flux Density limit” or pfd limit (dBW/m²) equals the interference threshold at radar receiver input (measured in dBW) minus the radar antenna gain (measured in dBi) plus $10^{\log(4\pi/\lambda^2)}$, where λ is the wavelength in meters;

“TD-LTE” means the TDD variant of LTE (Long Term Evolution) technology;

“TRP” (total radiated power) is a measure of how much power the antenna actually radiates and is defined as the integral of the power transmitted in different directions over the entire radiation sphere;

“Terminal Station” means mobile user equipment and fixed customer premise equipment which communicates with a Base Station using spectrum in the 700 MHz Duplex, 2.1 GHz Band or 2.6 GHz Band;

“Uplink” means transmissions from a Terminal Station to a Base Station; and

“Virgin Media” means Virgin Media Ireland Limited.

Technical Conditions

2. The 700 MHz Duplex

- (a) Only terrestrial systems compatible with the Decision of 2016 can be worked and used in the 700 MHz Duplex.
- (b) The FDD mode of operation shall be used in the 700 MHz Duplex. The duplex spacing shall be 55 MHz with Terminal Station transmission (FDD uplink) located in the lower frequency band 703-733 MHz and Base Station transmission (FDD downlink) located in the upper frequency band 758 -788 MHz.
- (c) The Licensee shall comply with all Memoranda of Understanding (‘MoU’)¹ agreed between the Commission and its neighbouring national regulatory authorities responsible for communications matters, in particular the Office of Communications (“Ofcom”) in the UK, or its successor, in relation to the 700 MHz Duplex.
- (d) The Licensee shall comply with the 700 MHz Coordination Procedures as agreed to by the MNOs, 2RN and Virgin Media on 3 April 2020 and published by the Commission on 7 April 2020 as Annex 4 to Commission Document 20/27.

¹ Memorandum of Understanding on frequency coordination between Ireland and the United Kingdom concerning the spectrum coordination of Land Mobile Radio Communication Networks in the frequency range 703 MHz to 2690 MHz, available at www.comreg.ie

Base Stations

- (e) Within a 700 MHz Duplex Block assigned to the Licensee, the in-block power from a Base Station must not exceed a maximum mean EIRP of 64 dBm/5 MHz per antenna.
- (f) Outside of the 700 MHz Duplex Block(s) assigned to the Licensee, the Licensee shall comply with the out-of-block BEM as specified in Section B of the Annex of the Decision of 2016.

Terminal Stations

- (g) The maximum mean in-block power limit of 23 dBm for Terminal Stations shall apply².
- (h) The out-of-block technical conditions set out in Table 10 to Table 12 of the Annex to the Decision of 2016 shall apply.
- (i) Where a Licensee holds more than 2×10 MHz in the 700 MHz Duplex and if this assignment is deployed starting at 703 MHz, the licensee shall not deploy a bandwidth greater than 10 MHz for Terminal Stations in order to meet the conditions as set out in Table 12 of the Annex to the Decision of 2016 to provide protection to the frequency range 470 - 694 MHz.

3. The 2.1 GHz Band

- (a) Only terrestrial systems compatible with the Decision of 2012 can be worked and used in the 2.1 GHz Band.
- (b) The duplex mode of operation shall be FDD. The duplex spacing shall be 190 MHz with Terminal Station transmission (FDD uplink) located in the lower part of the band starting at 1920 MHz and finishing at 1980 MHz and Base Station transmission (FDD downlink) located in the upper part of the band starting at 2110 MHz and finishing at 2170 MHz.
- (c) The Licensee shall comply with all MoU³ between the Commission and its neighbouring national regulatory authorities responsible for communications matters, in particular the Office of Communications (“Ofcom”) in the UK, or its successor, in relation to the spectrum in the 2.1 GHz Band.

Base Stations

² This power limit is specified as EIRP for Terminal Stations designed to be fixed or installed and as total radiated power (TRP) for Terminal Stations designed to be mobile or nomadic. This value is subject to a tolerance of up to + 2 dB, to take account of operation under extreme environmental conditions and production spread.

³ Memorandum of Understanding on frequency coordination between Ireland and the United Kingdom concerning the spectrum coordination of Land Mobile Radio Communication Networks in the frequency range 703 MHz to 2690 MHz, available at www.comreg.ie

- (d) Within a 2.1 GHz Band Block assigned to the Licensee, the in-block radiated power from a Base Station transmitter in the downlink direction must not exceed:
 - (i) an EIRP of 64 dBm/5 MHz per antenna for non-AAS; and
 - (ii) a TRP limit of 57 dBm/5MHz per cell for AAS.
- (e) Outside of the 2.1 GHz Band Block(s) assigned to the Licensee, the Licensee shall comply with the out-of-block BEM as specified in Section C of the Annex to the Decision of 2012.

Terminal Stations

- (f) The maximum mean in-block power limit over frequencies of FDD Uplink of 24 dBm for Terminal Stations shall apply⁴.

4. The 2.6 GHz Band

- (a) Only terrestrial systems compatible with the Decision of 2008 can be worked and used in the 2.6 GHz Band.
- (b) Within the 2.6 GHz Band FDD Generic Frequency Blocks, the duplex mode of operation is FDD, where the duplex spacing shall be 120 MHz with terminal station transmission (Uplink) located in the lower part of the band starting at 2500 MHz (extending to 2570 MHz) and base station transmission (downlink) located in the upper part of the band starting at 2620 MHz.
- (c) Within the 2570 - 2620 MHz frequency range of the 2.6 GHz Band, the modes of operation permitted in accordance with the Decision of 2008 are:
 - (i) TDD;
 - (ii) Base Station transmission only; and
 - (iii) Terminal Station transmission only.
- (d) To achieve coexistence of adjacent FDD and TDD networks:
 - (i) the 2.6 GHz Band TDD Fixed Frequency Block (Lower) is a restricted spectrum block as described in the Annex of the Decision of 2008; and
 - (ii) the 2.6 GHz Band TDD Fixed Frequency Block (Upper) may be utilised in accordance with the Decision of 2008 noting that it may suffer an increased risk of interference due to the emissions from the FDD downlink.
- (e) Licensees assigned 2.6 GHz Band TDD Blocks shall comply with the Inter-Licensee Synchronisation Procedure set out in Section 3 of this Licence.

⁴ This power limit is specified as EIRP for terminal stations designed to be fixed or installed and as TRP for terminal stations designed to be mobile or nomadic. EIRP and TRP are equivalent for isotropic antennas. It is recognised that this value may be subject to a tolerance defined in the harmonised standards to take account of operation under extreme environmental conditions and production spread.

- (f) The Licensee shall comply with all MoU⁵ between the Commission and its neighbouring national regulatory authorities responsible for communications matters, in particular the Office of Communications (“Ofcom”) in the UK, or its successor, in relation to spectrum in the 2.6 GHz Band.

Base Stations

- (g) Within any 2.6 GHz Band FDD Generic Frequency Blocks, any 2.6 GHz Band TDD Generic Frequency Blocks, and the 2.6 GHz Band TDD Fixed Frequency Block (Upper)⁶ assigned to a Licensee, the in-block radiated power from a Base Station transmitter must not exceed an upper limit of:
- (i) 68 dBm/5 MHz per antenna for Non-AAS; and
 - (ii) 60 dBm/5 MHz per cell for AAS.
- (h) Within the 2.6 GHz Band TDD Fixed Frequency Block (Lower), assigned to a Licensee, the in-block radiated power from a Base Station transmitter in the downlink direction must not exceed a mean in-block power of:
- (i) 25 dBm/5 MHz EIRP per antenna for Non-AAS; and
 - (ii) 22 dBm/5 MHz TRP limit per cell for AAS.
- (i) Outside of any 2.6 GHz Band FDD Generic Frequency Blocks assigned to the Licensee, the Licensee shall comply with the out-of-block BEM which is built up by combining Tables 2, 3 and 4 of Section C of the Annex of the Decision of 2008, in such a way that the limit for each frequency is given by the higher value out of the baseline and the in-block power limits.
- (j) Outside of the 2.6 GHz Band TDD Fixed Frequency Block (Lower), any 2.6 GHz Band TDD Generic Frequency Blocks and the 2.6 GHz Band TDD Fixed Frequency Block (Upper) assigned to a Licensee, the Licensee shall comply with the Inter Licensee Synchronisation procedure set out in Section 3.
- (k) Outside of the 2.6 GHz Band TDD Fixed Frequency Block (Lower) and where Base Station antennas are placed indoors, the BEM for Non-AAS may be in line with Table 6 of Section C of the Annex of the Decision of 2008, provided that at geographical borders to other Member States, Table 3 of Section C of the Annex of the Decision of 2008 applies and that Table 5 of Section C of the Annex of the Decision of 2008 remains valid nationwide.

⁵ Memorandum of Understanding on frequency coordination between Ireland and the United Kingdom concerning the spectrum coordination of Land Mobile Radio Communication Networks in the frequency range 703 MHz to 2690 MHz, available at www.comreg.ie

⁶ The 2.6 GHz Band TDD Fixed Frequency Block (Upper), which is immediately adjacent to the FDD downlink, may suffer an increased risk of interference due to the emissions from the FDD downlink.

- (l) Unless otherwise agreed between the Licensee and the IAA in writing, the Licensee shall ensure protection of all Aeronautical Primary Radars⁷, by:
- (i) deploying Base Stations outside of exclusion zones defined in Figures 4.3, 4.5, 4.6 and 5.3 of the Plum Report (Commission Document 19/124c)⁸; and
 - (ii) complying with the relevant Power Flux Density (pfd) limits with respect to:
 - I. the STAR2000 radars with locations as set out in Chapter 3 of Commission Document 19/59c⁹ as follows:
 - A. an out-of-band Base Station pfd limit of -145 dBW/m²/MHz per operator to address impact of spurious MFCN emissions at the radar antenna; and
 - B. an in-band Base Station pfd limit of -83 dBW/m² per operator, to address the impact of blocking and intermodulation effects at radar receivers.
 - II. the TA10 radar with a location as set out in Chapter 5 of Commission Document 19/124c¹⁰ as follows:
 - A. an out-of-band Base Station pfd limit of -156 dBW/m²/MHz per operator to address the impact of spurious MFCN emissions at the radar antenna; and
 - B. an in-band Base Station pfd limit of -93 dBW/m² per operator, to address the impact of blocking and intermodulation effects at radar receivers.
- (m) For deployments in compliance with condition (l) above, the Licensee shall nominate a point of contact for coordination with the IAA and provide written notification to the IAA of any 2.6 GHz Band deployments at least 48 hours in advance of their deployment, and provide such information on any 2.6 GHz Band deployments as may reasonably be required by the IAA, including information on antenna height, antenna orientation, and predicted coverage plots.

Terminal Stations

- (n) The maximum mean in-block power (including Automatic Transmitter Power Control range) of:

⁷ Aeronautical radar locations (Dublin, Shannon and Cork) and technical parameters are detailed in Plum Report, Commission Documents 19/59c and 19/124c, available at www.comreg.ie

⁸ Shape files (.SHP) representing these figures are available at www.comreg.ie

⁹ Commission Document 19/59c, available at www.comreg.ie

¹⁰ Commission Document 19/124c, available at www.comreg.ie

- (i) 35 dBm/5 MHz EIRP; and
 - (ii) 31 dBm/5 MHz TRP,
- shall apply to Terminal Stations¹¹.

Section 3: Inter-Licensee Synchronisation Procedure

This Section 3 applies only to Licensees who have been assigned 2.6 GHz Band TDD Blocks.

Definitions

1. The following additional definitions shall apply in this section:

“Default Frame Structure” means the frame structure as detailed in detailed in 3(1) below;

“Indoor Small Cell” means either a Non-AAS Base Station with an EIRP of less than or equal to 24 dBm per 20 MHz carrier or an AAS Base Station with a TRP of less than or equal to 16 dBm per 20 MHz carrier that is located indoors either within a residential or non-residential property;

“Other Frame Structure” means a frame structure other than the Default Frame Structure;

“Restrictive BEM” means, for Licensees utilising the Other Frame Structure (or failing to synchronise with adjacent channel networks for any other reason): for any 2.6 GHz Band TDD Blocks assigned to a Licensee, a restrictive BEM is given by combining Table 3 and either Table 2¹² or Table 5¹³ as appropriate in Section C of the Annex of the Decision of 2008, in such a way that the limit for each frequency is given by the higher value out of the baseline and the in-block power limits applies;

“Unrestrictive BEM” means Operators utilising the Default Frame Structure on their network (and having a common reference phase clock with adjacent channel operators¹⁴): for any 2.6 GHz Band TDD Blocks assigned to a Licensee, a BEM given by combining Table 2¹² or Table 5¹³ as appropriate, Tables 3 and 4 of Section C. of the Annex of the Decision of 2008, in such a

¹¹ EIRP should be used for fixed or installed terminal stations and the TRP should be used for the mobile or nomadic terminal stations. TRP is a measure of how much power the antenna actually radiates. The TRP is defined as the integral of the power transmitted in different directions over the entire radiation sphere.

¹² For 2.6 GHz Band TDD Generic Frequency Blocks and the 2.6 GHz Band TDD Fixed Frequency Block (Upper)

¹³ For the case of 2.6 GHz Band TDD Fixed Frequency Block (Lower)

¹⁴ Each operator needs to ensure the start of frame is aligned with adjacent channel operators above and below its assignment

way that the limit for each frequency is given by the higher value out of the baseline and the in-block power limits applies;

Introduction

2. (1) Licensees assigned 2.6 GHz Band TDD Blocks shall be bound by the inter-Licensee synchronisation procedure set out in this Section 3.

(2) Licensees shall co-operate in such a way that one network deployment within spectrum in the 2.6 GHz Band does not cause Harmful Interference to that of another Licensee.

(3) This procedure sets out the circumstances in which Licensees may use the Unrestrictive BEM and the Restrictive BEM, so as to minimise the risk of Harmful Interference to other Licensees.

Conditions for using the Unrestrictive BEM

3. Default Frame Structure - The technical conditions for Unrestrictive BEM shall apply where a Licensee's Base Station complies with the Default Frame Structure outlined below:

- (a) Transmissions from a Licensee's Base Station(s) shall have a frame structure as shown in Table 1. Indicated timeslots (or subframes) must not be allocated to anything other than Downlink (D) and Uplink (U) transmissions. 'S' denotes a special subframe. TD-LTE frame configuration 2 (Downlink: Uplink, 3:1) with special subframe configuration 6 or equivalent frame structures whose transmit and receive periods are aligned with this configuration are permitted;
- (b) Timeslots shall have a duration of 1 millisecond; and
- (c) Licensees shall ensure that frames start at a common reference time ($\pm 1.5 \mu\text{s}$) so that all Licensees' frames are aligned and transmissions synchronised.

DL/UL ratio	Timeslot or Subframe number									
	0	1	2	3	4	5	6	7	8	9
3:1	D	S	U	D	D	D	S	U	D	D

Table 1: Default Frame Structure

Conditions for using the Restrictive BEM

4. Other Frame Structure — the technical conditions for Restrictive BEM shall apply where a Licensee's Base Station complies with the Other Frame Structure as outlined below:

- (a) All frame configurations that are not compatible with TD-LTE frame configuration 2 (3:1) with special sub-frame configuration 6 or equivalent frame structure whose transmit and receive periods are aligned with this configuration are permitted;
- (b) Licensees shall co-operate to minimise Harmful Interference caused by sub-frame overlaps if different technologies are used; and
- (c) Licensees using the Restrictive BEM shall not cause Harmful Interference to those Licensees' networks that use the Default Frame Structure (or equivalent). Achieving this may include applying internal guard bands and/or reduced in block power levels in blocks adjacent to those Licensees' networks that use the Default Frame Structure (or equivalent).

Indoor Small Cells

5. Indoor Small Cells for indoor domestic and other indoor locations are permitted to operate under the Unrestrictive BEM on the condition that they do not cause Harmful Interference to any other Licensees.

Section 4: Coverage Requirements

1. Coverage at specific locations in the State

Coverage	Location	Obligation
Outdoors	Specific locations in relation to the extraordinary situation arising from COVID-19 as may be determined from time to time by the Government and communicated to the Commission by the Department of the Environment, Climate and Communications	Best efforts using all rights of use available to the Licensee

Table 1: Outdoor coverage obligations at specific locations in relation to the extraordinary situation arising from COVID-19

GIVEN under the official seal of the Commission for Communications Regulation,
 day of 2021

For and on behalf of the Commission for Communications Regulation

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

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

day of 2021

EAMON RYAN

Minister for the Environment, Climate and Communications

EXPLANATORY NOTE

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

These Regulations prescribe matters in relation to the further temporary licences (No. 3) for apparatus for wireless telegraphy for terrestrial systems capable of providing Electronic Communications Services in the 700 MHz Duplex, the 2.1 GHz, the 2.6 GHz Bands to address the temporary impact upon Electronic Communications Networks and Electronic Communications Services from the extraordinary situation arising from COVID-19.

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