



An Coimisiún um  
**Rialáil Cumarsáide**  
Commission for  
**Communications Regulation**

# The potential issue of short-term spectrum rights of use in the 700 MHz and 2.1 GHz bands from October 2022

## Proposals to mitigate consumer disruption

Consultation and Draft Decision including Draft Regulations

**Reference:** ComReg 22/72

**Date:** 23/08/2022

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## Chapter 1

# 1 Introduction & Summary

## 1.1 Introduction: The purpose of this document

- 1.1 This document sets out the Commission for Communications Regulation's ("ComReg") proposals to put in place a short-term (up to 6 months) licensing framework for the issue of spectrum rights of use in the 700 MHz and 2.1 GHz bands from 2 October 2022 (the "Proposed Framework").
- 1.2 Alongside this document, ComReg is also publishing Document 22/72a, being a report by DotEcon Ltd. ("DotEcon")<sup>1</sup> setting out expert advice and recommendations, including fees benchmarking, which have informed the Proposed Framework ("DotEcon Report").

## 1.2 Background

- 1.3 On 18 December 2020, following a lengthy, detailed and comprehensive consultation process, ComReg published its Decision<sup>2</sup> to hold a multi-band spectrum award to assign long-term rights of use across four important spectrum bands, all of which are suitable for wireless broadband services ("MBSA2"). These spectrum bands are the 700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz bands which are all harmonised at European level for the provision of wireless broadband ("WBB") services across Europe. The MBSA2 is hugely important for several reasons:
  - The award comprises 470 MHz of harmonised spectrum which represents a **46% increase in the spectrum assigned** for the provision of WBB services in Ireland. This will significantly enable operators to provide improved services to meet ever-increasing consumer demand;
  - The 700 MHz band is an important band for the provision of **widespread coverage, including in rural areas and on national transport routes**. This is especially important in Ireland, given our challenging demographic characteristics and the high and exponential costs associated with deploying very high levels of coverage. Indeed,

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<sup>1</sup> DotEcon is ComReg's external economic and award design consultant for the award of long-term rights of use in the 700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz bands in the Multi Band Spectrum Award process.

<sup>2</sup> [ComReg Document 20/122](https://www.comreg.ie/), "Multi Band Spectrum Award Response to Consultation and Decision", published 18 December 2020, available at <https://www.comreg.ie/>

Ireland has one of the most widely distributed and rural populations in Europe;

- The 700 MHz band is and is also highly suitable for the provision of **4G and new 5G services**;
- The 2.1 GHz, 2.3 GHz and 2.6 GHz bands are ideally suited to providing **network capacity and thereby enhanced performance**, if used for mobile broadband services, although they can also be used for both capacity and coverage purposes (such as for fixed wireless broadband services in rural areas).

- 1.4 In line with its obligation to promote competition in the electronic communications sector, ComReg decided to award long-term rights of use in these important bands by way of an **open and competitive award process (i.e., auction)** whereby existing operators and potential new entrants could compete for such rights of use. The auction was due to take place during 2021. However, in January 2021, Three Ireland (Hutchison) Limited and Three Ireland Services (Hutchison) Limited (collectively referred to as “Three”) appealed ComReg’s Decision. ComReg strongly contested Three’s appeal, which was heard by the High Court in mid-2021. The appeal was also before the court in October and November 2021. Judgment was ultimately reserved on 23rd November 2021 and is **still awaited**.
- 1.5 The existence of the appeal did not operate as a stay on the implementation of ComReg’s decision, and ComReg continued to progress the Award Process, albeit with some alterations to timing. Because some **important existing spectrum licences are due to expire in October 2022**, ComReg took steps to proceed with the MBSA2 auction in order to enable the assignment of long-term rights of use in advance of expiration of these licences. However, in July 2022, the High Court granted Three **a stay which now prevents ComReg from proceeding with the MBSA2 auction** until judgment issues on the substantive appeal. ComReg has appealed the grant of the stay to the Court of Appeal.
- 1.6 While ComReg is appealing the stay decision and continues to await the substantive judgment from the High Court, the consequence of the stay is that ComReg is no longer able to progress the assignment of long-term rights of use in these bands for the long-term benefit of consumers, pursuant to the Decision. Instead, ComReg must attempt to address, as best it can, any potential for consumer disruption in the short term (arising from the expiration of existing licences) through the proposed **administrative grant of short-term licences**, until some certainty from the Courts emerges, while at the same time attempting to safeguard the integrity of the future MBSA2 auction and the award of long-term licences.

1.7 This situation is far from ideal because, for example:

- according to Cullen International<sup>3</sup>, **Ireland is one of only a small number of European countries** that has yet to issue long term rights of use for some or all of the key 5G 700 MHz band<sup>4 5</sup>;
- it is **not good for competition**: at best it sits uneasily with ComReg's statutory obligations and objectives<sup>6</sup> relating to the promotion of competition. With the aim of avoiding consumer disruption, it might be said that it has the incidental benefit of maintaining existing competition. However, unlike MBSA2, it cannot be said that such a measure promotes competition;
- it **freezes the market to the benefit of incumbent MNOs which raises a potential inconsistency with EU law**: in principle, measures which have the effect of freezing the structures of the national market and protecting the position of operators already active on that market are incompatible with the EU common regulatory framework;
- it **creates continuing incentives for MNOs to seek to delay MBSA2**: this is a rational outcome because it allows MNOs to postpone costly investment decisions while at the same time making significant economic gains without having to compete for this valuable spectrum in an auction or being subject to the risk of new entry;
- it is **not good for consumers**: whilst it would avoid potential consumer disruption in the short term, there is little doubt that the administrative grant of short-term rights of use to the trio of incumbent MNOs is not ultimately good for consumers in terms of price, choice and quality, when compared to the assignment of long-term rights of use via the MBSA2;
- it **does not promote investment in new and enhanced infrastructure and will delay the widespread deployment of 5G**: The short-term nature of these rights of use will inevitably delay some important investment decisions, in particular with regard to the

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<sup>3</sup> Cullen International is an independent regulatory intelligence provider. See <https://www.cullen-international.com/>

<sup>4</sup> Bulgaria, Lithuania, Poland, Romania, Serbia and Turkey aside from Ireland. See [Spectrum Database \(cullen-international.com\)](#)

<sup>5</sup> In the European Commission's Digital Economy and Society Index 2021 Digital infrastructure report, Ireland's '5G readiness score' for assigning spectrum in the 5G pioneer bands (i.e. 700 MHz, 3.6 GHz and 26 GHz) is 30%. This score is based solely on Ireland's assignment of spectrum in the 3.6 GHz band and suggests that the current temporary assignment of spectrum in the 700 MHz band does not meet the requirements of EU Decision 2017/899.

<sup>6</sup> Indeed, ComReg is of the view that it is only in a position to contemplate the grant of short-term rights of use because of the extraordinary situation created by the stay.

widespread rollout of 5G services, a rollout which is advancing in many other Member States and the UK where the 700 MHz band has been assigned;

- it leads to an overall cost to the economy in the order of magnitude of **€1 billion per annum. Therefore, even a 3-month delay could cost the Irish economy in the region of €250m.**<sup>7</sup>

1.8 Notwithstanding, in order to mitigate potential consumer disruption that might arise due to impending expiration of existing licences, on 22 July 2022 ComReg published an Information Notice (ComReg Document 22/63<sup>8</sup>) which:

- noted in paragraph 7 that ComReg was “*open to receiving views on the potential issue of short-term rights of use in the 2.1 GHz band, and possibly in other spectrum bands encompassed by the MBSA2 award*”;
- requested that interested parties submit the information outlined in Section 2.2 of that document for the purposes of assisting ComReg in determining whether a short-term licensing framework might be necessary and, if so, how it should be designed; and
- requested the submission of this information by Tuesday 2 August 2022, noting that an accelerated consultation process was necessary given the limited time available before the expiry of rights of use in the 2.1 GHz band in October 2022.

### Responses submitted to Document 22/63

1.9 In response to this request, submissions were received from each of the three MNOs, namely:

- Eircom Ltd (“Eir”);
- Three Ireland Hutchison Ltd (“Three”); and
- Vodafone Ireland Ltd (“Vodafone”).

1.10 The non-confidential versions of these submissions are set out in Annex 4 of

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<sup>7</sup> In opposing the Stay Application, ComReg, with the assistance of its external economic advisor Dr Maldoom emphasised the importance of proceeding with the Auction and awarding long term licences. Dr Maldoom and a report prepared by an independent expert, Professor Peter Clinch, Jean Monnet Full Professor and Chair of Public Policy at University College Dublin, put the overall cost to the economy of a delay in the award of these long-term licences in the order of magnitude of €1 billion per annum.

<sup>8</sup> [ComReg Document 22/63](https://www.comreg.ie/publication/), “*The potential issue of short-term rights in the 2.1 GHz band and possibly in other spectrum bands included in the Multi Band Spectrum Award*”, published 22 July 2022. Available at <https://www.comreg.ie/publication/>

this document.

## 1.3 Summary of key proposals

### Potential consumer disruption

1.11 Each of the MNOs claim that consumers will experience significant disruption of mobile services when their existing spectrum rights of use in the 700 MHz and 2.1 GHz bands expire on 1 October 2022 and 15 October 2022, respectively. In summary:

- Eir claims:
  - that it has a “*very significant dependency on the temporary spectrum availability of both 700 MHz and 2100 MHz*” and that there would be “*a massive risk of a serious degradation in customer experience to the entire eir customer base if spectrum availability is constrained in any way*”; and
  - that there are two critical spectrum bands 700 MHz and 2100 MHz that require urgent action from ComReg to ensure customer experience is maintained and further improved during this period of uncertainty of spectrum availability;
  - for the 700 MHz Band:
    - that on a national network basis there are [redacted] sites deployed supporting [redacted] of data traffic and [redacted] of voice traffic; and,
    - there is a greater dependency in rural areas where [redacted] of data traffic is supported.
  - for the 2.1 GHz Band:
    - that on a national basis, LTE 2100 has been activated on [redacted] sites supporting [redacted] of data traffic and [redacted] of voice traffic; and,
    - in urban areas, there is a greater dependency on the above deployment with [redacted] of data traffic and [redacted] of voice traffic supported on the band.
- Three claims:
  - for the 700 MHz Band:

- that on a national basis there are [ ] sites deployed supporting over [ ] of all 4G traffic;
- that an estimated [ ] customers of Three and the Mobile Virtual Network Operators (“MVNO”) on its network, benefit from the coverage on the 700 MHz band at present; and
- the licences expiring in October would cause a significant deterioration to or loss of service to the above consumers and it would not be possible to replace this in the short term. Three submits that the customers worst affected are likely to be those in rural and suburban areas.
- For the 2.1 GHz Band:
  - On a national basis there are [ ] sites deployed supporting over [ ] of Three’s 4G traffic, which it claims could not be compensated for using alternatives in a short timeframe; and
  - any further reduction in use of 2100 MHz or its loss would severely impact on the quality of data service provided to customers over 4G and would also have an impact on voice service.
- Vodafone claims:
  - for the 700 MHz Band:
    - it has deployed [ ] sites on its network and that on a national basis this band carries [ ] of Vodafone’s data traffic and [ ] of its total VoLTE traffic;
    - in Rural/Suburban areas where mid/high-band frequencies struggle to meet customer requirements, Vodafone is very reliant on this spectrum band to provide coverage and capability. This band carries [ ] of the data traffic and [ ] of the VoLTE traffic in these areas;
    - without this band, customers in congested areas of rural Ireland would face significant service issues where Vodafone estimates that approximately [ ] of sites would be impacted with Vodafone being unable to build additional sites to replace the coverage lost over the short-term.
  - For the 2.1 GHz Band:

- there are [x< [redacted] x<] sites deployed carrying [ x< [redacted] x< ] of its total network data traffic and [ x< [redacted] x< ] of total VoLTE traffic;
- this band is mainly deployed in towns and cities and is used for LTE at sites with high traffic demand; and,
- without this band, customers in these areas would notice a severe degradation in call connection, call-setup time, dropped call rate and data connectivity.

### **The purpose of the Proposed Framework is to avoid significant consumer disruption**

- 1.12 The purpose of the Proposed Framework is to provide the existing licensees in the 700 MHz and 2.1 GHz bands (i.e. the three MNOs) with the opportunity to apply for and be granted short-term licence(s) for spectrum rights of use in the 700 MHz and 2.1 GHz bands in order to avoid the significant disruption of mobile services that would likely otherwise occur when their existing spectrum rights of use in these bands expire on 1 October 2022 and 15 October 2022, respectively. This would benefit consumers of mobile services generally, including those who obtain services from MVNOs.

### **The Proposed Framework should not delay or disincentivise the award of long-term spectrum rights**

- 1.13 Noting the significant benefits associated with the issue of long-term rights of use in the spectrum bands encompassed by the MBSA2, a key principle in designing the Proposed Framework is that it should not delay or otherwise disincentivise MBSA2 and that it is without prejudice to the award of long-term spectrum rights of use in these bands. It is also important to note that such short-term rights of use are an exception to the general rule under the EU common regulatory framework that new rights in these bands should be assigned on a long-term basis and via an open and competitive / comparative selection process<sup>9</sup>. Accordingly, it is incumbent on ComReg to ensure that any short-term rights are granted for the minimum duration necessary and otherwise in accordance with the common regulatory framework, including as to fees.

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<sup>9</sup> Specifically, it is also important to note that for spectrum bands harmonised for WBB (such as those included in the MBSA2) the EU common regulatory framework obliges that such spectrum rights are assigned for a period of 20 years, and that derogations from this approach may only occur where duly justified and for specific cases.

## Key proposals in this document

1.14 The key proposals set out in this document include that:

- in order to avoid likely consumer disruption, spectrum rights in the 700 MHz and 2.1 GHz band would be made available to the existing licensees in these bands whose licences expire on 1 October and 15 October 2022 respectively<sup>10</sup>;
- spectrum rights in the 2.3 GHz and 2.6 GHz bands would not be made available at this time because, as these bands are not presently assigned, there are no consumer disruption issues related with these bands;
- spectrum rights in the 700 MHz and 2.1 GHz bands would be made available on a national basis, and for up to the same amount of spectrum currently licensed to the existing licensees and for the same spectrum blocks;
- the assignment process for such rights would be based on the submission of a complete application to ComReg including the payment of the relevant fees;
- the duration of the licensing framework would be for up to three months, in keeping with the judgement of Mr Justice McDonald. The regulations would, however, provide for the possibility of up to a further 3 month period, although the expectation, based solely on the judgement, is that this will not be required; and,
- the fees would be set at an approximation of market value for the band as set out in Table 1 below.

**Table 1: Proposed Fees per band**

Band	Fee (€) per 2 × 5 MHz block per 3 month period
<b>700 MHz</b>	€401,000

<sup>10</sup> ComReg's view has been formed solely because Incumbent Licensees are best placed to address the consumer disruption arising from the expiry of existing 700 MHz and 2.1 GHz rights of use. ComReg considers it unlikely that other operators would be able to address this consumer disruption at such short notice and given the limited duration because it involves issues of service continuity relevant to Incumbent Licensees only. However, ComReg is open to the possibility that other operators may contend that they would be able to remove the consumer disruption and should therefore be provided access to these rights of use. This is considered in Chapter 4 below.

2.1 GHz	€212,000
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1.15 Noting that the circumstances surrounding the MBSA2 project may change between now and the proposed expiry date for the Proposed Framework, ComReg proposes to include specific provisions to minimise potential delays to the issue of long-term rights. These provisions would allow:

- ComReg to issue a licence (initial or renewal) with a duration shorter than 3 months, should it be appropriate to do so, for example, if ComReg expected to issue long-term rights within the 3-month period; and
- Licensees to foreshorten any short-term rights of use issued and receive a pro-rata refund of any licence fees paid, for example, if such short-term rights are no longer needed by the licensee given the issue of long-term spectrum rights.

1.16 In arriving at its proposals set out in this document, ComReg has had regard to the prevailing circumstances surrounding the 700 MHz and 2.1 GHz bands and to its statutory powers, functions, objectives, and duties relevant to its management of the radio frequency spectrum, the most relevant of which are summarised in Annex 2. That said, and given the particular situation regarding short-term licensing that ComReg has had to take, it is important to clarify that ComReg cannot properly accommodate any objective save for maintaining consumer services by minimising consumer disruption.

1.17 ComReg has also had regard to all relevant information available to it, which includes amongst other things:

- the submissions received from interested parties<sup>11</sup>;
- the expert advice and recommendations from DotEcon<sup>12</sup>; and
- various relevant background information<sup>13</sup>.

## 1.4 Next steps and submitting comments

1.18 Given the potential for consumer disruption and the limited time now available before expiry of rights of use in the 700 MHz and 2.1 GHz bands in October 2022, ComReg is employing an accelerated consultation process in accordance with its Consultation Procedures<sup>14</sup>. Specifically, ComReg invites

<sup>11</sup> See Annex 4 of this document for the non-confidential submissions.

<sup>12</sup> See Document 22/72a published alongside this document on ComReg's website.

<sup>13</sup> See Chapter 2 of this document.

<sup>14</sup> See Document 11/34.

input from interested parties by 17:00 hours (Irish time) **on Wednesday 31 August 2022**.

- 1.19 Following this, ComReg envisages that a response to consultation, final decision, and final draft regulations<sup>15</sup> would be issued by mid-September 2022, which would afford ComReg some limited time to (i) seek the consent of the Minister to the making of regulations, (ii) to allow the submission of licence applications and fees by interested parties, and (iii) to issue licences (where appropriate).

## 1.5 Structure of document

1.20 This document is structured as follows:

- **Chapter 2:** sets out some background information relevant to this consultation process including information on (i) the spectrum bands in the MBSA2 noting in particular those bands with existing spectrum rights of use expiring in October 2022 and (ii) the current status of the MBSA2 including the amendment of the MBSA2 Regulations;
- **Chapter 3:** sets out a summary of the submissions by interested parties in response to Document 22/63, and ComReg's preliminary assessment on whether it would be appropriate to consider a short-term assignment of spectrum rights of use, including matters such as, (i) the duration of any short-term rights of use granted and (ii) the geographic scope of the licenses.
- **Chapter 4:** sets out ComReg's draft short term assignment regulatory impact assessment (RIA).
- **Chapter 5:** sets out ComReg's assessment and proposals on spectrum fees and licence conditions.
- **Chapter 6:** sets out ComReg's draft Decision regarding its proposals;
- **Chapter 7:** sets out information on submitting comments in response to this consultation and outlines the next steps.
- **Annex 1:** includes a glossary of terms;

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<sup>15</sup> These are described as 'final draft' Regulations because the consent of the Minister to making the final Regulations must then be obtained under section 37 of the Communications Regulation Act 2002, and edits could also be required in any final proofing exercise.

- **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 draft Regulations to facilitate the Proposed Framework for the assignment of short-term spectrum rights of use in the 700 MHz and 2.1 GHz bands and an amendment to the MBSA2 regulations required to give ComReg discretion with regard to the commencement date of rights of use in the 2.1 GHz band; and
- **Annex 4:** sets out the non-confidential submissions received from respondents to Document 22/63.

## Chapter 2

# 2 Background Information

2.1 In this Chapter, ComReg sets out some background information relevant to this consultation, including information on:

- those MBSA2 bands with existing spectrum rights of use expiring in October 2022; and
- the current status of the MBSA2;

## 2.1 The spectrum bands in the MBSA2

2.2 There are four spectrum bands encompassed by the MBSA2, being the 700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz bands.

### 2.1.1 2.1 GHz band

2.3 In 2002 and 2007, ComReg issued spectrum rights in the 2.1 GHz band to each of the MNOs<sup>16</sup>. These licences were issued for twenty years, after which the spectrum rights of use associated with these licences would expire.

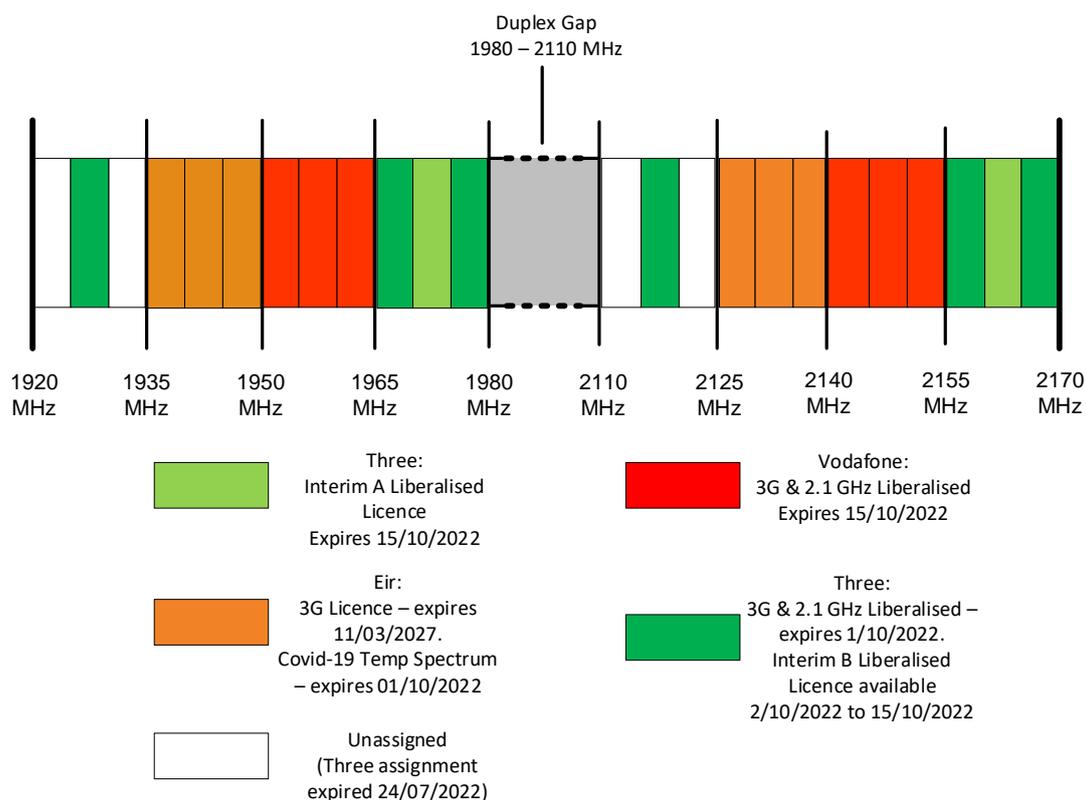
2.4 Since being made available, the 2.1 GHz band has been central to the provision of mobile services in Ireland, initially being used to provide both network capacity and coverage for 3G services and, more recently, for the provision of 4G and 5G services which was made possible through the issue of liberalised spectrum rights of use to:

- Three and Vodafone under the Wireless Telegraphy (Third Generation and GSM Licence (Amendment) and Interim Licensing) Regulations 2021 (S.I 265 of 2021); and
- Eir under the Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) (No.4) Regulations 2021 (S.I. No. 138 of 2022).

2.5 Figure 1 below sets out the current spectrum assignments and licensees in the 2.1 GHz band.

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<sup>16</sup> Three's 2.1 Band spectrum rights of use include rights that it was assigned in 2002 and also rights that it acquired from Telefonica Ireland Ltd t/a O2 in a merger in 2014 and which were also originally granted in 2002.



**Figure 1: The current spectrum assignments and licensees in the 2.1 GHz band**

2.6 In October 2022, certain spectrum rights in the 2.1 GHz band will expire for each of the MNOs (Eir, Three and Vodafone) as outlined below:

- For Eir, while its existing 3G Licence for 2 × 15 MHz of spectrum rights will not expire until 11 March 2027, its COVID-19 temporary spectrum licence which liberalises these spectrum rights will expire on 1 October 2022;
- For Three, its existing spectrum rights of 2 × 20 MHz will expire on 15 October 2022<sup>17</sup>; and
- For Vodafone, its existing spectrum rights of 2 × 15 MHz will expire on 15 October 2022.

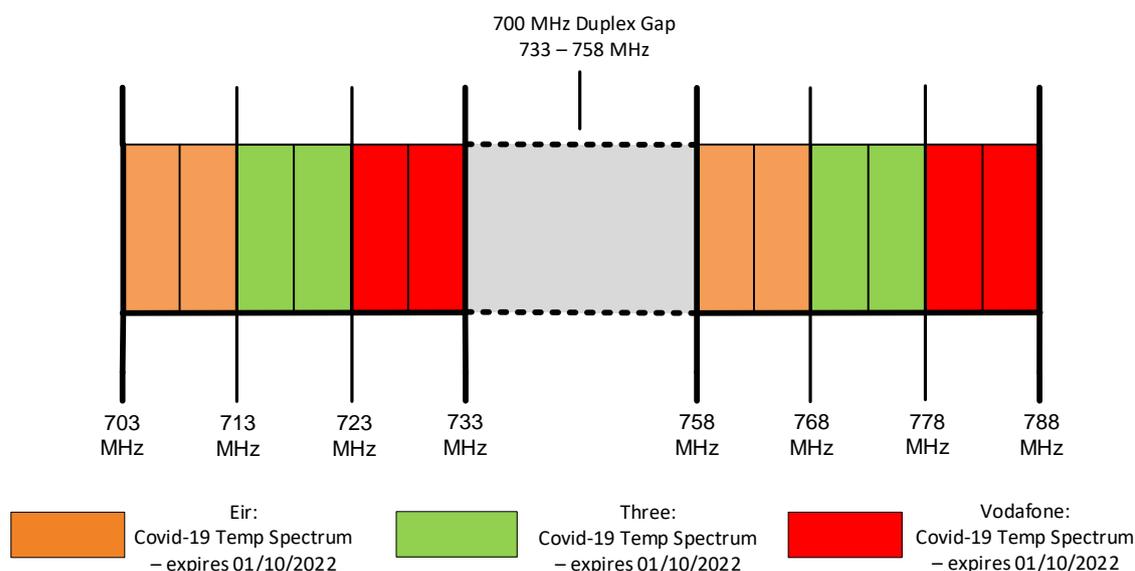
### 2.1.2 700 MHz band

2.7 Since April 2022 and given the exceptional and extraordinary circumstances presented by COVID-19, ComReg has issued COVID-19 temporary

<sup>17</sup> This assumes that Three completes the remaining application process steps and is granted an Interim B 2.1 GHz Band Liberalised Use Licence for its existing assignment of 2 × 15 MHz for the period 2 October 2022 to 15 October 2022.

spectrum licences to each of the MNOs for 2 × 10 MHz of spectrum rights in the 700 MHz spectrum.

- 2.8 To varying degrees, these spectrum rights have been used by each of the MNOs to provide additional network coverage and capacity for the provision of 4G voice and data services to meet the increased and changed network traffic that arose due to the exceptional and extraordinary circumstances presented by COVID-19.
- 2.9 Figure 2 sets out the current spectrum assignments and licensees in the 700 MHz band.



**Figure 2: The current spectrum assignments and licensees in the 700 MHz band**

- 2.10 The current COVID-19 temporary spectrum licences all expire on 1 October 2022.
- 2.11 As outlined in ComReg Document 22/58<sup>18</sup>, ComReg took the view that there is no basis for considering any further COVID-19 temporary spectrum licensing framework beyond 1 October 2022 noting, among other things, that the COVID-19 temporary spectrum licensing frameworks have always been justified on the basis of COVID-19 Government measures. In this regard, ComReg observes that, since March 2022, there are no Government COVID-19 restrictions in Ireland, and there are no indications that this is likely to change.

<sup>18</sup> ComReg Document [22/58](#), “COVID 19 Temporary Spectrum Licensing - July 2022 update and end of COVID-19 temporary spectrum licensing on 1 October 2022”, published 5 July 2022.

### 2.1.3 2.3 GHz and 2.6 GHz bands

- 2.12 The 2.3 GHz and 2.6 GHz bands are harmonised spectrum bands suitable for the provision of WBB services.
- 2.13 If used for mobile services, these spectrum bands are ideally suited to providing network capacity, although they can also be used for both capacity and coverage purposes when used for services such as fixed wireless broadband.
- 2.14 Currently, there are no licences issued for the provision of WBB services in the 2.3 GHz or the 2.6 GHz bands, and no WBB services are currently provided to end users using these bands.

## 2.2 Current status of the MBSA2

2.15 On 22 July 2022, ComReg summarised the current status of the MBSA2 in paragraphs 2 to 5 of Document 22/63 as follows:

- *“On 21 July 2022, Mr. Justice McDonald of the High Court made an order granting Three its Stay Application<sup>[19]</sup>, thereby suspending ComReg from commencing the Main Stage (i.e., Auction) of the MBSA2, pending the substantive judgement on the Appeal by Mr. Justice O’Moore.*
- *Prior to the issuing of this judgment on the Stay Application, ComReg had advanced the implementation of the MBSA2 to the point where the Auction was to commence on 25 July 2022. This would have resulted in licences being issued in advance of expiry of certain existing licences<sup>[20]</sup> in the 2.1 GHz band on 15 October 2022. The 2.1 GHz band is a critical spectrum band currently used for the provision of 4G services<sup>21</sup> but has been liberalised for other technologies and services.*

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<sup>19</sup> Footnote 2 of Document 22/63: *“On 2 June 2022, Three applied to the Commercial Court for a stay on the commencement of the Main Stage of the MBSA2 Auction (the “Stay Application”) pending determination of the Appeal.”*

<sup>20</sup> Footnote 4 of Document 22/63: *“Namely the 2.1 GHz Band licences of Three and Vodafone, noting that the 2.1 GHz Band licence of Meteor Mobile Communications (a subsidiary of Eircom Limited, trading as Eir) expires on 11 March 2027.”*

<sup>21</sup> Footnote 5 of Document 22/63: *“In 2002, and 2007, ComReg issued 3G licences for spectrum rights in the 2.1 GHz band to each of the MNOs. These licences were issued for twenty years, after which the spectrum rights of use associated with these licences expire. ComReg Decision (D11/20) provided the opportunity for all three licensees (Three Vodafone and Eir) to obtain liberalised rights of use. In Q2 2021 and upon application being received by Vodafone and Three ComReg issued liberalised rights of use to allow the use of this band for both 4G and 5G services”.*

- *However, as noted above, the effect of the judgment granting Three's Stay Application is that the MBSA2 is now suspended from progressing any further pending the delivery of the substantive judgment on the Appeal by Mr. Justice O'Moore. Therefore, ComReg is unable to issue long-term licences in advance of the expiration of these important 2.1 GHz licences.*
- *Further, ComReg had aimed to ensure that new rights of use were made available by 15 October 2022 as this corresponds to the expiry of certain existing rights of use in the 2.1 GHz band. However, ComReg is now unable to provide any certainty to stakeholders as to when it will be in a position to issue long-term spectrum rights of use in these important spectrum bands (700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands), as this depends on when the substantive judgment of the Court will be issued. ComReg notes that Mr. Justice McDonald expressed the opinion in his oral judgment of 20 July 2022, that, in his view, the stay is likely to remain in place for no more than 'a few months'. However, ComReg cannot say when the substantive judgement on the Appeal might be delivered." [emphasis added].*

#### 2.16 Since then:

- On 22 July 2022, ComReg wrote to Bidders in the MBSA2 informing them that the Main Stage of the Award Process will not commence on 25 July 2022. In addition, this letter stated that:
  - *"It is not yet known how long the period of the stay may be, however Mr Justice McDonald indicated that he believed it would be for no more than a few months.";* and
  - *"Noting that judgment in the Appeal may be forthcoming in the next few months and may find in ComReg's favour, ComReg reminds the Bidder that, in accordance with paragraph 5.16 of the IM<sup>22</sup>, the Applications submitted continue to remain contractually binding offers for six months from the date of submission of the Phase 2 Application."*
- On 25 July 2022, ComReg lodged a notice of appeal to the Courts in relation to the Mr. Justice McDonald's judgment on the Stay

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<sup>22</sup> Which states, amongst other things, "All Applications (including Applications which do not ultimately become qualifying Applications) by Applicants comprise offers which must remain open and valid for six (6) months from the date of submission". (Footnote 1 of Letter of 22 July 2022 to Bidders).

Application. On 29 July a hearing date of 19 October 2022 was set for ComReg’s appeal of the judgment on the Stay Application.

- On 12 August 2022, Three submitted its responding notice to ComReg’s appeal of the Stay Application judgment, and also submitted a notice of cross-appeal on certain aspects of this Stay Application judgment.

## 2.2.1 Amendment of MBSA2 Regulations

2.17 Noting the above, and in line with paragraph 3.15.5 of the MBSA2 Decision<sup>23</sup>, ComReg observes that an amendment is now required to the MBSA2 Regulations<sup>24</sup> to provide sufficient flexibility for the commencement of spectrum rights of use in the 2.1 GHz Band for Time Slice 1 to be on a date other than 16 October 2022.

2.18 In particular, ComReg proposes to amend the MBSA2 Regulations by:

- substituting the definition for Time Slice 1 in Regulation 2(1) with the following definition:

*“Time Slice 1” means, in relation to 2.1 GHz Band Blocks, 2.3 GHz Band Blocks and 2.6 GHz Band Blocks, such commencement date as may be specified by the Commission and ending on 11 March 2027;”*

- substituting the following for Regulation 5(1):

*“Duration of Licences*

*5. (1) The commencement date of a MBSA2 Liberalised Use Licence shall be specified in the Licence and, in respect of spectrum rights of use for:*

- (a) 700 MHz Duplex Blocks shall be such date as may be specified by the Commission;*
- (b) 2.1 GHz Band Blocks, 2.3 GHz Band Blocks and 2.6 GHz Band Blocks in Time Slice 1 shall be such date as may be specified by the Commission; and*
- (c) 2.1 GHz Band Blocks, 2.3 GHz Band Blocks and 2.6 GHz Band Blocks in Time Slice 2 shall be 12 March 2027.”*

<sup>23</sup> “3.15.5 2.1 GHz Band Frequency Generic Lots being made available in two “time slices”, being:

*i. 2.1 GHz Band Time Slice 1: From 16 October 2022 (or such other date as may be specified by ComReg in, or in accordance with, the Information Memorandum) to 11 March 2027 (or such other date as may be specified by ComReg in, or in accordance with, the Information Memorandum);“ (Emphasis added)*

<sup>24</sup> SI 264 of 2021 (Wireless Telegraphy (Liberalised Use and Related Licences in the 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands) Regulations 2021).

- 2.19 To carry through this change, a corresponding update will be made to the relevant text in the Information Memorandum which will be communicated directly to bidders in the award process in due course.

## Chapter 3

# 3 Potential need for a licensing framework for short-term rights of use

- 3.1 This chapter sets out ComReg's preliminary assessment on whether it would be appropriate to implement a licensing framework for the issue of short-term rights of use in one or more of the MBSA2 spectrum bands from October 2022 and, if so, ComReg's preliminary assessment on the duration and scope of such rights noting also that further aspects of any Proposed Framework would be considered in Chapter 4 and 5.
- 3.2 This chapter is structured as follows:
- Section 3.1 outlines the information requested in Document 22/63 from interested parties in support of any short-term licensing framework;
  - Section 3.2 summarises the submissions from interested parties;
  - Section 3.3 sets out ComReg's preliminary assessment on whether it would be appropriate to seek to put in place a short-term licensing framework and if so, the potential duration and scope of same.

## 3.1 Information requested in Document 22/63

- 3.3 In Section 2.2 of Document 22/63, ComReg outlined the information that it would need from interested parties to help inform its considerations as to whether a short-term licensing framework would be necessary and, if so, how it should be designed.
- 3.4 Specifically, at paragraph 13 of Document 22/63 ComReg requested that this information should include:
- "i. Justification for the short-term temporary licensing of the 2.1 GHz band and, if appropriate, other spectrum bands, noting that this should include information on:*
- *the potential for consumer disruption and the location of same, should short term spectrum rights not be provided for;*
  - *the potential to use this spectrum band over the duration of any short-term licensing framework;*

- *the number and location of existing sites, transmitters and apparatus licensed in the spectrum band;*
  - *the percentage of total network voice and data traffic currently carried by the spectrum band; and*
  - *the potential to reconfigure existing networks, should short term spectrum rights not be provided in the spectrum band.*
- ii. the duration of any licensing framework noting that this should be for the minimum time-period necessary and without prejudice to the long-term assignment of spectrum rights in these bands;*
- iii. the quantity of spectrum, if any, to be assigned in the spectrum band, noting that in the 2.1 GHz Band Three has opted to not request an Interim A licence for the full 2 x 15 MHz available, obtaining a licence for 2 x 5 MHz and the authorisation method, noting that growth in data has returned to normal and expected data growth, and consequently, capacity constraints previously due to COVID-19 are likely to have abated;*
- iv. the geographic scope of any licensing framework;*
- v. spectrum fees, noting that Mr. Justice McDonald in his oral judgement stated that such fees should be commensurate with to the commercial value of the radio spectrum which is a point with which ComReg agrees and which aligns with the regulatory framework;*
- vi. the licence conditions, noting that the main purpose of the licensing framework is to mitigate consumer disruption by maintaining the existing levels of services for a short period of time beyond October 2022. For example, it may be appropriate to consider licensing conditions that would only cover existing apparatus at the standing sites listed in the existing licences; and*
- vii. technical licence conditions to ensure co-existence with other existing Electronic Communications Services.”*

## **3.2 Summary of interested parties' submissions**

- 3.5 The information submitted by the three respondents is presented using the same headings used in Document 22/63, along with other issues raised.
- 3.6 Interested parties' views on spectrum fees and licence conditions are set out

and considered in Chapter 5.

### 3.2.1 Justification for a short-term licensing framework per spectrum band

**The potential for consumer disruption, and the location of same, should short term spectrum rights not be provided for**

3.7 Eir contends that:

- it has a “*very significant dependency on the temporary spectrum availability of both 700 MHz and 2100 MHz*” and that there would be “*a massive risk of a serious degradation in customer experience to the entire eir customer base if spectrum availability is constrained in any way*”; and
- that there are two critical spectrum bands 700 MHz and 2100 MHz that require urgent action from ComReg to ensure customer experience is maintained and further improved<sup>25</sup> during this period of uncertainty of spectrum availability;

3.8 Eir submits that, in its view, the effects of the COVID-19 pandemic remain as valid today as it did during the initial government lock-down initiatives and opines that, in its view, it is broadly acknowledged that the pandemic is not over. In this regard, Eir contends that:

- Ireland continues to see rising case volumes<sup>26</sup> and that these are expected to again surge in the autumn and winter months; and
- data traffic growth, in particular, remains at levels in excess of generic growth and that it continues to see COVID-19 related impacts associated with a slow pace of return to the office, continued remote working, and now an increase in visitor numbers to Ireland due to easing of travel restrictions. It has seen data traffic growth of [ X █████ X ] for the year to date in 2022 and, while voice traffic has stabilised, it remains at an elevated level in comparison to pre pandemic years;

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<sup>25</sup> ComReg would point out that the objective of the Temporary ECS Licensing Framework was never to further improve existing services, but merely to mitigate the impact of the Government pandemic measures on those services.

<sup>26</sup> As discussed further below, it is actually only the imposition of the Government pandemic measures which was relevant to the justification for Temporary ECS Licensing Frameworks.

- it expects both data and voice traffic profiles will continue for the remainder of 2022 and into 2023.

3.9 Vodafone contends that COVID-19 remains a significant disruptive influence in Ireland and that the 700 MHz band must be included in any short-term spectrum rights licensing framework. In this regard, Vodafone maintains that:

- in Rural/Suburban areas where mid/high-band frequencies struggle to meet customer requirements, Vodafone is very reliant on this spectrum band to provide coverage and capability; and
- without this band, customers in congested areas of rural Ireland would face significant service issues where Vodafone estimates that approximately [ ✂ [REDACTED] ✂ ] of sites would be impacted with Vodafone being unable to build additional sites to replace the coverage lost over the short-term.

3.10 In relation to the 2.1 GHz band, Vodafone submits that this band is mainly deployed in towns and cities and is used for LTE at sites with high traffic demand with customers experiencing [ ✂ [REDACTED] ✂ ] higher data throughput than if 3G technology was used. Should rights of use in the 2.1 GHz band expire, Vodafone contends that customers in these areas would notice a severe service degradation in call connection, call-setup time, dropped call rate and data connectivity.

3.11 Three contends that ComReg should bring forward a licensing scheme to provide for short term licenses in the 700 MHz band as well as the 2.1 GHz band in order to avoid what it characterises as significant harmful disruption to the provision of mobile services and consequently to consumers. In this regard, Three maintains that:

- MNOs have built out significant networks<sup>27</sup> using the 700 MHz band which is especially valuable in providing connectivity in rural areas and should such services be absent it would result in a reduced quality of service including cases where there would no longer be any service at all.
- although restrictions related to COVID-19 have largely been removed, some aspects of life will never return to their pre-COVID state, for example, altered work habits and the rate of working from

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<sup>27</sup> ComReg would remind MNOs in this regard that it was made clear from the outset that it was not the intention that MNOs would make significant network investments under the Temporary ECS Licensing Framework. See for example paragraph 3.15 of Document 20/21 and the Applicant Declaration Form.

home has resulted in a significant uplift and changed location of demand in Three's network<sup>28</sup>.

- the 700 MHz band tends to be used to provide coverage and capacity for 4G services in rural and suburban areas. Its withdrawal would, in Three's opinion, primarily impact people who live in these areas, as well as having a broad impact on the mobility of data services. Three submits that withdrawal of the 700 MHz band would impact over [ X █████ X ] of its and its MVNO customers.
- the 2.1 GHz band is integral to the provision of mobile services in Ireland and is a core service band within Three's overall network. Three uses this band primarily to provide 4G data capacity service in suburban and urban areas, with it being used to a lesser extent for provision of voice 3G services; and
- any further reduction in use of the 2.1 GHz Band or its loss would severely impact on the quality of data service provided to customers over 4G and would also have an impact on 3G voice service.

### The potential to use the 700 MHz and 2.1 GHz bands over the duration of any short-term licensing framework

- 3.12 Eir submits that it has made extensive and continued investment in its mobile network over the last 4 years, focusing on enhancing mobile service<sup>29</sup> experience for customers. As part of this investment, Eir states that it has utilised the Temporary ECS Licenses for both 700 MHz and 2.1 GHz.
- 3.13 Vodafone submits that it has equipment available to utilise the spectrum and would continue to do so given its reliance on the 700 MHz and 2.1 GHz bands.
- 3.14 Three submits that it could continue to use the 700 MHz and 2.1 GHz bands as it does today – primarily for 4G service with some voice service in the 2.1 GHz band for specific locations.

### The number and location of existing sites, transmitters and apparatus licensed in the spectrum band

- 3.15 Eir submits that, in the 700 MHz band, it has deployed active services across [ X █████ X ] sites as of 28 July and has deployed [ X █████ X ] LTE sites

<sup>28</sup> See ComReg's observations in this regard in Section 3.3.4 below.

<sup>29</sup> Although, ComReg would point out that the objective of the Temporary ECS Licensing Framework was never to further improve existing services, but merely to mitigate the impact of the Government pandemic measures on those services.

in the 2.1 GHz Band. Eir submits that this investment has provided an additional capacity layer which has resulted in improved customer experience<sup>30</sup>.

- 3.16 Vodafone submits that, in the 700 MHz band, it has [ X [REDACTED] X ] live sites on its network and has [ X [REDACTED] X ] sites deployed in the 2.1 GHz band.
- 3.17 Three submits that, in the 700 MHz band, it has deployed active services across [ X [REDACTED] X ], according to its internal coverage thresholds, and has [ X [REDACTED] X ] deployed in the 2.1 GHz band.

**The percentage of total network voice and data traffic currently carried by the spectrum band**

- 3.18 Eir submits that, on a national basis, the 700 MHz band supports [ X [REDACTED] X ] of data traffic and [ X [REDACTED] X ] of voice traffic and there is a greater dependency in rural areas where [ X [REDACTED] X ] of data traffic is supported on the band.
- 3.19 For the 2.1 GHz band, Eir submits that it has utilised all 15 MHz for the provision of enhanced<sup>31</sup> data services under the Temporary ECS Licences, and that nationally, the 2.1 GHz band accounts for [ X [REDACTED] X ] of data traffic and [ X [REDACTED] X ] of voice traffic. Eir also submits that urban areas are more dependent on the 2.1 GHz band with [ X [REDACTED] X ] of data traffic and [ X [REDACTED] X ] of voice traffic supported on the band.
- 3.20 Vodafone submits that the 700 MHz band carries [ X [REDACTED] X ] of its total data traffic and [ X [REDACTED] X ] of its VoLTE traffic. In areas of high reliance on 700 MHz i.e. rural/suburban areas where mid/high-band frequencies struggle to meet customer requirements, the 700 MHz band accounts for [ X [REDACTED] X ] of data traffic and [ X [REDACTED] X ] of VoLTE traffic. For the 2.1 GHz band, Vodafone submits that this now accounts for [ X [REDACTED] X ] of Vodafone’s total network data traffic and [ X [REDACTED] X ] of its total VoLTE traffic.
- 3.21 Three submits that the 700 MHz band currently carries over [ X [REDACTED] X ] of all 4G traffic nationally. It states that, given the short time to respond to Document 22/63, it has not been able to segment this figure into urban vs rural areas, but expects that this band would be of greater importance to people in rural areas and would account for a higher proportion of rural traffic.

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<sup>30</sup> ComReg would point out that the objective of the Temporary ECS Licensing Framework was never to further improve existing services, but merely to mitigate the impact of the Government pandemic measures on those services.

<sup>31</sup> ComReg would point out that the objective of the Temporary ECS Licensing Framework was never to further improve existing services, but merely to mitigate the impact of the Government pandemic measures on those services.

For the 2.1 GHz band, Three submits that this band carries [ ✂ [REDACTED] ✂ ].

### The potential to reconfigure existing networks, should short term spectrum rights not be provided in the spectrum band

- 3.22 Vodafone contends that, should short term rights of use not be granted in the 2.1 GHz band, then it would not be in a position to reconfigure its existing network to provide a service equal to that currently provided. In effect, Vodafone submits that this would remove [ ✂ [REDACTED] ✂ ] of the installed cell capacity<sup>32</sup>.
- 3.23 Three contends that the capacity provided by rights of use in both the 700 MHz and 2.1 GHz bands could not be replaced in the short-term using other alternatives. In particular, Three notes that it has recently reduced its 2.1 GHz band holdings from 6 lots to 4 lots, and that [ ✂ [REDACTED] ✂ ]. Any further reduction in 2.1 GHz band holdings, or its loss, would severely impact on the quality of data service provided to customers over 4G and would also have an impact on voice service.
- 3.24 Three opines that, if it attempted to mitigate this harm using other mid-band spectrum, it would have a knock-on impact on the development of 5G services.

## 3.2.2 Quantum of spectrum and spectrum blocks

- 3.25 Eir contends that, given that in its view there is widespread deployment and dependence on the 700 MHz band, this band should be assigned in the same manner as under the COVID-19 Temporary ECS Licensing Framework.
- 3.26 For 2.1 GHz, Eir submits that operators should be able to avail of 20 MHz of liberalised, contiguous spectrum. Eir acknowledges that this would require agreement among operators and agreement on transition activities ahead of the expiry of licences in these bands on 15 October 2022, with Eir opining that there is sufficient time to manage such a transition process.
- 3.27 Eir submits that if agreement cannot be secured for a 20 MHz assignment, then a 15 MHz assignment of liberalised spectrum to the existing operators is appropriate.
- 3.28 Vodafone submits that, for the 2.1 GHz Band, a continuance of the existing

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<sup>32</sup> Noting that it is not clear from Vodafone's submission if this [ ✂ [REDACTED] ✂ ] relates to the 700 MHz band, 2.1 GHz band or both bands, as elsewhere in Vodafone's submission this [ ✂ [REDACTED] ✂ ] figure is indicated in relation to the 700 MHz band.

rights of use should be put in place to ensure minimal disruption. For the 700 MHz Band, Vodafone considers that the existing assignment under Temporary ECS Licences is appropriate.

3.29 Three notes that the purpose of any short-term rights of use is to provide for continuity of the status quo so as to avoid disruption brought about through loss of service. On that basis, Three submits that a continuation of existing rights of use in the 700 MHz and 2.1 GHz bands should be provided.

3.30 Three also submits that:

- it has an open view as to whether other bands included in the MBSA2 should also be included;
- it may be possible to assign the unused lots of spectrum in the 2.1 GHz band as part of this process; and
- it recognises that this may be beyond the scope of the main purpose of the short-term rights of use.

### 3.2.3 Duration

3.31 Eir contends that any short-term rights must be granted until the long-term spectrum award process can be concluded, with such rights of use being available for a period of up to a minimum of 6 – 9 months. Eir submits that this period could be shortened following conclusion of the MBSA2 award process. Eir believes that such an approach would give industry confidence for continued investment and removes uncertainty of service degradation for consumers.

3.32 Vodafone contends that any short-term rights of use should be for the minimum time necessary and proposes that the model used under the Temporary ECS Licensing Framework should be followed i.e. rights of use should be awarded for two 3-month periods for a maximum of 6 months.

3.33 Three opines that the Temporary ECS Licences provided a successful framework for short-term licences and that ComReg should replicate or continue to use the same scheme to the extent possible and appropriate i.e. provision for a 3 month licence with the possible extension for a second period of 3 months. Three considers that short-term rights of use could terminate on the day of commencement of any long-term assignments resulting from MBSA2.

### 3.2.4 Geographic scope

3.34 All respondents submit that short-term rights of use in the 700 MHz and 2.1

GHz Bands should be made available on a national basis.

- 3.35 Eir contends that short term rights of use should not have any restrictions related to the existing deployed sites. Eir opines that such an approach would ensure that operators can continue to invest and enhance mobile connectivity throughout Ireland and ensure that the impact of the now delayed MBSA2 does not constrain customer experience.
- 3.36 Regarding 2.3 GHz and 2.6 GHz spectrum, Eir considers that a site-by-site approach could be facilitated until the long-term award process is concluded.

### **3.3 ComReg's preliminary assessment on whether it is appropriate to put in place a short-term licensing framework**

3.37 In this section ComReg sets out its preliminary assessment on:

- whether it is appropriate to put in place a short-term licensing framework;
- the appropriate duration of any such licensing framework; and
- the geographic scope.

3.38 In addition, this chapter considers the other matter raised by respondents, namely COVID-19 and changed traffic patterns.

3.39 At the outset, however, it is important to note that, given the significant benefits associated with the issue of long-term rights of use in the spectrum bands encompassed by the MBSA2, a key principle in designing any licensing framework is that it should not delay MBSA2 and that it is without prejudice to the award of long-term rights of use in these bands. Any licences issued on foot of this the Proposed Framework would be subject to this principle.

#### **3.3.1 Would it be appropriate to put in place a short-term licensing framework?**

3.40 From respondents' submissions, ComReg observes that:

- in relation to the 700 MHz and 2.1 GHz bands, all three MNOs:
  - claim that consumers will experience significant disruption of mobile services when their existing spectrum rights of use in the 700 MHz

and 2.1 GHz bands expire on 1 October 2022 and 15 October 2022, respectively; and

- contend that ComReg should put in place a short-term licensing framework for the 700 MHz and 2.1 GHz bands to avoid consumer disruption.<sup>33</sup>
- in relation to the 2.3 GHz and 2.6 GHz bands:
  - no respondent suggests that these bands would be required to address consumer disruption issues, although Eir suggests that these bands could be made available on a site-by-site basis to facilitate operator demand.

3.41 Having considered the views of respondents and the advice of DotEcon in Document 22/72a, ComReg observes that there are no services deployed in these bands and therefore no consumer disruption issues arise. ComReg considers that a short-term licensing framework for the 700 MHz and 2.1 GHz bands could be appropriate in principle, as outlined further below.

### The potential for consumer disruption in the 700 MHz and 2.1 GHz bands from October 2022

3.42 As outlined in Chapter 2:

- the 2.1 GHz Band has long been used for the provision of 3G services and, more recently, 4G services and, as such, is a core band for the delivery of mobile services in the State; and
- the 700 MHz Band has been licensed for over 2 years and 4-months since 9 April 2020 (over several COVID 19 temporary licences<sup>34</sup>) and has been used for the deployments of 4G services.

3.43 In relation to both of these bands, ComReg observes that existing spectrum rights of use are due to expire shortly in October:

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<sup>33</sup> For example,

- Three estimate that almost [ 3< [REDACTED] 3< ] customers of Three and its MVNOs can benefit from the coverage of the 700 MHz Band and notes that the 700 MHz Band is of much greater importance to people in rural areas and would account for a higher proportion of rural traffic.
- Vodafone estimate that with the deployments of LTE in the 2.1 GHz Band, customers have been typically experiencing [ 3< [REDACTED] 3< ] higher data throughput at these sites than they did when 3G was used. Customers in these areas would notice a severe disruptive degradation in call connection, call set-up time, dropped call rate and data connectivity and throughput rate.
- Eir notes that there is a very significant dependency on the temporary spectrum availability of both the 700 MHz and 2.1 GHz Bands and a massive risk of serious degradation in customer experience to the entire Eir customer base if spectrum availability is constrained in any way.

<sup>34</sup> See <https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/covid-19-temporary-spectrum-management-measures/>

- in 700 MHz band, for Eir, Three and Vodafone on 1 October 2022;
- in the 2.1 GHz Band for Three and Vodafone on 15 October 2022<sup>35</sup>;
- in the 2.1 GHz Band for Eir on 1 October 2022, where these rights of use have permitted Eir to deploy LTE in the 2.1 GHz Band, noting that its longer-term rights expiring on 11 March 2027 only permit the use of UMTS/3G; and
- that these spectrum rights account for over 20% of the total spectrum currently licensed of the MNOs.

3.44 From the information provided to ComReg by the three respondents, ComReg observes that:

- the MNOs have deployed a considerable number of sites in the 2.1 GHz and 700 MHz bands as detailed in Table 2 below; and
- that these spectrum bands are being used to provide data and voice services to customers, with traffic levels as detailed in Table 3 below.

**Table 2 Breakdown of sites per operator per band, as provided in submissions to Document 22/63**

	2.1 GHz Band Site Deployments	700 MHz Band Site Deployments
<b>Eir</b>	[X █████ X]	[X █████ X]
<b>Three</b>	[X █████ X]	[X █████ X]
<b>Vodafone</b>	[X █████ X]	[X █████ X]

**Table 3 Breakdown of data and voice traffic per band per operator**

Operator	2.1 GHz Band		700 MHz Band	
	Data	Voice	Data	Voice
<b>Eir</b>	[X █████ X] of data traffic with this increasing to	[X █████ X] of voice traffic with this increasing to	[X █████ X] of total data traffic	[X █████ X]

<sup>35</sup> Three’s current B Licence expires on 1 October 2022, however Three has applied for an interim B licence where, once payment has been received, will issue and will expire on 15 October 2022.

	[redacted] in urban areas	[redacted] in urban areas	[redacted] of data traffic in rural areas	
<b>Three</b>	Over [redacted] of 4G traffic	No specific figure provided, but [redacted]	[redacted] of all 4G traffic	No data provided
<b>Vodafone</b>	[redacted] of total data traffic	[redacted] of VoLTE traffic	[redacted] of total data traffic [redacted] of data traffic in rural areas	[redacted] of total VoLTE traffic [redacted] of VoLTE traffic in rural areas

3.45 The above data suggests that:

- use of the 700 MHz and 2.1 GHz bands represents a notable proportion of both the network and data traffic at a national level;
- the 700 MHz band carries a greater proportion of the network traffic in rural/suburban areas;
- the 2.1 GHz band carries a greater proportion of the network traffic in urban areas.<sup>36</sup>

3.46 To address any consumer disruption issues that might arise with the expiry of existing spectrum rights of use, ComReg observes that both Vodafone and Three provided submissions in relation to their respective capability to carry

<sup>36</sup> It is well understood that the 700 MHz band is better suited for providing wide area coverage, while mid-band spectrum such as the 2.1 GHz Band is more suited to more densely populated areas.

this traffic using other spectrum bands.

- 3.47 Vodafone contends that should temporary rights not be provided for in the 2.1 GHz band it would not be able to reconfigure existing networks to provide a service equal to that currently provided. It maintains that it would be removing [ ✕ [REDACTED] ✕ ] of the installed cell capacity so this would have a detrimental impact on customers. Vodafone contends that the use of additional spectrum at sites is a much more efficient way of providing services to consumers than adding extra physical infrastructure at new sites.
- 3.48 Three submits that any reduction or loss of rights of use in the 2.1 GHz band would be mitigated through the use of other mid-band spectrum and would result in a knock-on impact on the development of 5G services.

### **Significant consumer disruption would likely occur if existing spectrum rights of use expire in October without replacement rights of use**

- 3.49 Given the above, it seems that, absent short-term continued access to the expiring rights of use, there would be significant service disruption for consumers, particularly those in rural/suburban areas in relation to the 700 MHz Band and suburban/urban areas in relation to the 2.1 GHz Band noting the significant reliance on these spectrum bands to provide services in these areas.
- 3.50 Further, ComReg notes that each MNO can utilise the spectrum immediately having done so for the last 20 years under the 2.1 GHz band licences, and the last 2 years and 4 months in respect of the 700 MHz band. ComReg also notes MNOs' claims that it would not be possible to reconfigure their networks or use other existing spectrum rights of use to provide a comparable service before expiry of licences.
- 3.51 Considering the above, ComReg is of the preliminary view that it would be appropriate to establish the Proposed Framework where the primary purpose of the framework is to mitigate the potentially significant consumer disruption to consumers that would otherwise occur when existing rights of use expire in the 700 MHz and 2.1 GHz Bands.

### **3.3.2 Duration of any licensing framework**

- 3.52 In relation to the proposed duration of any short-term rights of use:
- Three and Vodafone both submit that the approach used in the Temporary ECS Licences should be followed whereby licences are issued for an initial period of 3 months and, if required, renewed for a further 3 months;

- Eir considers that the duration should be for a minimum period of 6-9 months.

3.53 ComReg observes that there is broad agreement between respondents that short-term rights of use should cover the period up to and including the award of long-term rights of use in the bands.

3.54 ComReg observes that the duration of any licences should be sufficient to mitigate the claimed consumer disruption that could arise following the expiry of licences in October 2022 and Mr Justice McDonald opined that this will be for a short duration. However, the current situation is far from ideal, as at this juncture, the issue of long-term rights of use under the MBSA2 cannot occur due to the stay granted by the High Court which is in place until the judgement on the substantive case is delivered.

3.55 Whereas, the date of judgement is unknown, notwithstanding the statement on 20 July of Mr Justice McDonald:

*“In the first place, any stay granted by me is likely to be of a relatively short duration. It is likely to be in place for no more than a few months.”*  
(emphasis added)<sup>37</sup>

3.56 In light of the above, ComReg’s preliminary view is that the duration of any short-term licensing framework needs to be for the minimum duration necessary and that an approach where licences could be issued for up to 3 months is appropriate. ComReg will make provision for the possibility for a short renewal of no more than a further 3 months, although this was not considered likely by Mr Justice McDonald in his judgement.

3.57 Noting that the circumstances surrounding the MBSA2 project may change in the intervening period, ComReg proposes to include specific provisions to minimise delays to the issue of long-term rights. These provisions would allow:

- ComReg to issue a licence with a duration shorter than 3 months, should it be appropriate to do so, for example, if ComReg expected to issue long-term rights within the 3-month period; and
- licensees to foreshorten any short-term rights of use issued and receive a pro-rata refund of any licence fees paid, for example, in the event that such short-term rights are no longer needed by the licensee given the issue of long-term spectrum rights.

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<sup>37</sup> Extract from court transcript, 20 July 2022.

### 3.3.3 Geographic scope

3.58 ComReg notes the views of respondents that any licenses issued should be on a national basis. In this regard ComReg observes that the existing rights of use are issued on a national basis and the service disruption is in both rural and urban areas. Considering this ComReg is of the preliminary view that any rights of use issued in the Proposed Framework should be on a national basis.

### 3.3.4 Other Issues Raised

#### The continued impact of COVID-19 on Mobile Networks

3.59 In their various submissions, the respondents (MNO's) claim that their respective networks continue to be adversely affected by the changed traffic patterns due to COVID-19, and one respondent expressed concerns about the upcoming autumn and winter months.

3.60 Document 22/58 sets out ComReg's consideration of the COVID-19 Temporary ECS licensing framework based on the information available at that time. As set out in that document and noting among other things that the government has removed all COVID-19 related restrictions, ComReg set out its view that there was no basis for any COVID-19 Temporary ECS Licences beyond 1 October 2022.

3.61 ComReg notes that, since Document 22/58 was published, the government has not re-introduced any COVID-19 measures and there is no indication of any plans to do so. ComReg remains of the view that there is no basis for implementing any COVID-19 Temporary ECS Licences Framework beyond 1 October 2022

3.62 Further ComReg observes that:

- The changes in traffic patterns and usage areas described by respondents, with a greater reliance on hybrid working are now likely to be a permanent feature of how network voice and data will be consumed; and
- the issue of long-term assignment of rights of use (e.g. in the MBSA2 bands (700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands)) remains the optimal solution to allow operators to plan and meet the evolved needs of consumers. The currently proposed short-term rights of use are being put in place *solely* to mitigate the consumer disruption that would be caused due to the expiry of existing licences.

## Chapter 4

# 4 Draft short-term assignment RIA

## 4.1 Introduction

- 4.1 Having considered submissions received to Document 22/63 and other material before it, in Chapter 3, ComReg considered that significant disruption to consumer services could arise if existing rights of use in the 700 MHz and 2.1 GHz Bands expired and observed that short-term rights of use may thus be necessary in these bands.
- 4.2 This RIA considers the form and manner such short-term rights of use might take, and whether such rights of use are necessary and appropriate having regard to ComReg's statutory framework and associated objectives and the particular facts and exceptional circumstances of the potential short-term assignment.

## RIA Framework

- 4.3 In general terms, a RIA is an analysis of the likely effect of a proposed new regulation or regulatory change, and, indeed, of whether regulation is necessary at all. A RIA should help identify the most effective and least burdensome regulatory option and should seek to establish whether a proposed regulation or regulatory change is likely to achieve the desired objectives, having considered relevant alternatives and the impacts on stakeholders. In conducting a RIA, the aim is to ensure that all proposed measures are appropriate, effective, proportionate and justified.

## Structure of a RIA

- 4.4 As set out in ComReg's RIA Guidelines<sup>38</sup>, there are five steps in a RIA. These are:
- Step 1: Identify the policy issues and identify the objectives.
  - Step 2: Identify and describe the regulatory options.
  - Step 3: Determine the impacts on stakeholders.
  - Step 4: Determine the impacts on competition.
  - Step 5: Assess the impacts and choose the best option.
- 4.5 In the following sections, ComReg identifies the specific policy issues to be addressed and relevant objectives for the proposed short-term assignment

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<sup>38</sup> See [ComReg Document 07/56a](#), "Guidelines on ComReg's approach to Regulatory Impact Assessment", published 10 August 2007, available at [www.comreg.ie](http://www.comreg.ie)

(i.e., Step 1 of the RIA process).

- 4.6 The focus of Step 2 is to identify and describe regulatory options, noting that some potential options may not be valid for further assessment in steps 3 and 4.
- 4.7 The focus of Step 3 is to assess the impact of the various regulatory options identified in Step 2, on stakeholders which are identified at the outset of that section.
- 4.8 The focus of Step 4 is to assess the impact on competition and consumers of the various regulatory options available to ComReg. While related, ComReg provides separate assessments on competition and consumers. In that regard, ComReg notes that it has various statutory functions, objectives and duties which are relevant to the issue of competition. See Annex 2 'Legal Framework and Statutory Objectives'.
- 4.9 Of themselves, the RIA Guidelines and the RIA Ministerial Policy Direction provide little guidance on how much weight should be given to the positions and views of each stakeholder group (Step 3), or the impact on competition (Step 4). Accordingly, ComReg has been guided by its statutory objectives which it is obliged to seek to achieve when exercising its functions. ComReg's primary statutory objectives in managing the radio frequency spectrum for ECN/ECS, as outlined in Annex 2, include:
- the promotion of competition;
  - contributing to the development of the internal market; and
  - the promotion of the interests of users within the community.
- 4.10 In this document, ComReg has adopted the following structure in relation to Step 3 and Step 4 – the impact on industry stakeholders is considered first, followed by the impact on competition and consumers. This order does not reflect any assessment of the relative importance of these issues but rather reflects a logical progression. In particular, a measure which safeguards and promotes competition should also, in turn, impact positively on consumers. Accordingly, the assessment of the impact on consumers draws substantially upon the assessment carried out in respect of the impact on competition.

## 4.2 Identify the policy issues & the objectives (Step 1)

### Policy issues

- 4.11 ComReg had aimed to ensure that new rights of use were made available by October 2022 as this corresponds to the expiry of certain existing rights of use in the 700 MHz and 2.1 GHz Bands. However, considering the High

Court order granting Three its Stay Application, ComReg has been unable to commence the Main Stage of the MBSA2 as planned. It is now likely that existing rights of use in the 700 MHz and 2.1 GHz Bands will expire in October and before the commencement of MBSA2 rights of use.

- 4.12 Chapter 3 determined, among other things, and absent any measures by ComReg, that the expiry of existing 700 MHz and 2.1 GHz rights of use could create consumer disruption for the period between the expiry of those rights of use and the commencement of MBSA2 rights of use. Further, there is uncertainty around the commencement of MBSA2 rights of use, and consequently around how long any consumer disruption would last. ComReg also notes that the long-term societal benefits will only be ensured through the completion of MBSA2. Therefore, while avoiding consumer disruption is of primary importance here, any proposed measures should, in as far possible, avoid creating distortions that would compromise the MBSA2 award.
- 4.13 Considering the above, the primary policy issue for this Assignment RIA is to determine what short-term rights of use in the 700 MHz and 2.1 GHz bands (if any) should be made available in order to prevent or mitigate the consumer disruption that could occur following the expiry of 700 MHz and 2.1 GHz rights of use in October this year, without creating distortions that would compromise ComReg's broader objectives in MBSA2. The potential assignment of rights of use in this case are exceptional and short term in nature and should be contrasted with long term rights of use (approximately 20 years) to be determined separately in MBSA2.

## Objectives

- 4.14 In normal circumstances, ComReg aims to design and carry out any proposed assignment process in accordance with its broader statutory objectives (as outlined in Annex 2) including the promotion of competition in the electronic communications sector.
- 4.15 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.

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

- ensure that elderly users and users with special social needs derive maximum benefit in terms of choice, price and quality;
- ensure that, in the transmission of content, there is no distortion or restriction of competition in the electronic communications sector; and
- A key objective in designing and carrying out this assignment process is to seek to encourage the efficient use and ensure the effective management of the radio frequency spectrum.

4.17 That said and given the particular situation regarding short-term licensing that ComReg has had to take, it is important to clarify that ComReg is greatly constrained and thus cannot properly accommodate any objective referred to above save for maintaining consumer services by minimising consumer disruption.

### 4.3 Identify and describe the regulatory options (Step 2)

4.18 As noted in ComReg’s RIA Guidelines, “*the first option will always be to make no change to the current regulatory policy, and other possible options will then be added. The option of making no policy change will not always be practical but its inclusion serves as a benchmark against which other options can be compared*”<sup>39</sup>. Therefore, **Option 1** is the ‘do nothing’ option and involves ComReg taking no regulatory action and allowing existing 700 MHz and 2.1 GHz rights of use expire on 1 October and 15 October respectively.

4.19 To determine other potential options, ComReg notes that there are several licensing aspects that typically need to be determined when assigning spectrum rights of use – described as follows.

- i. Which electronic communications networks/services, using which technologies, are going to be the ones most likely to provide the greatest end-consumer benefits over the proposed duration of the rights being awarded? (“Which technologies”);
- ii. Which of all the interested providers of the ECN/ECS (and using potentially different technologies) identified in (2) are going to be the ones most likely to provide the greatest end-consumer benefits over the duration of the rights being awarded and should, therefore, be

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<sup>39</sup> See [ComReg Document 07/56a](#), “*Guidelines on ComReg’s approach to Regulatory Impact Assessment*”, published 10 August 2007, available at [www.comreg.ie](http://www.comreg.ie)

issued said rights? (“Which providers”);

- iii. Determination of the quantum of spectrum rights in each of the proposed bands that should be assigned to each provider identified in (3). (“What Quantum”); and
- iv. Determination of which part of the band those spectrum rights identified in (4) should be located (“What Position”).

4.20 To determine appropriate regulatory options for this RIA, ComReg briefly assesses the policy issues against these licensing aspects.

### 4.3.1 Licensing aspects

#### Which technologies?

4.21 Existing rights of use in the 700 MHz and 2.1 GHz Bands<sup>40</sup> were provided on a liberalised basis in accordance with the principle and requirements of service and technology neutrality that would permit the deployment of all technologies and services that comply with the relevant EC/ECC harmonisation decisions for those bands. ComReg is of the preliminary view that there is no justification for deviating from this approach.

4.22 Any assignment decision taken by ComReg that limits short-term rights of use to a particular technology could create scenarios that potential licensees would have to transition out of certain technologies provided under the existing rights of use. This would clearly create consumer disruption to the extent that consumers were using one or more technologies not provided by the short-term assignment. Furthermore, technology or service restrictions risk distorting operators longer term investment plans beyond the duration of any short-term licences.

4.23 Therefore, ComReg is of the preliminary view that any regulatory option (other than Option 1) should be to make available short-term rights of use on a liberalised basis.

#### Which Providers?

4.24 DotEcon recommends that short-term licences are made available only to licensees whose rights of use in the 700 MHz and 2.1 GHz Bands are expiring ('Incumbent Licensees'), because this follows from the service continuity objectives that are necessitated following the judgement of Mr

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<sup>40</sup> See S.I. 122 of 2020 but noting that ComReg identified in Document 20/27 that the intention of the COVID-19 Temporary ECS licensing framework should not be used for the large-scale rollout of networks that were not previously planned but allowed for some flexibility to install or redeploy equipment and to continue with existing network upgrade plans.

Justice McDonald in staying the MBSA2. Removing access to spectrum already being used could negatively impact on operators' ability to continue providing the services already available to consumers.

- 4.25 ComReg generally agrees with this approach because making short-term rights of use available to operators other than Incumbent Licensees could result in such operators being assigned some of the rights of use currently assigned to the Incumbent Licensees<sup>8</sup>. Consumers currently benefiting from these rights of use would likely suffer immediate consumer disruption to a greater or lesser extent depending on the nature of assignment. For the avoidance of doubt, non-incumbent users may be more efficient users of the radio spectrum over periods of longer duration such as the 20-year period proposed in the Proposed MBSA2. However, the judgment of Mr Justice McDonald has necessitated a proposed assignment focussed on Incumbent Licensees (i.e., MNO's) so as to avoid any consumer disruption.
- 4.26 ComReg therefore agrees with the observations made by DotEcon and is of the preliminary view that any regulatory option (other than Option 1) should consider making available short-term rights of use to Incumbent Licensees, as this maintains existing services without compromising the efficiency of the eventual award of long-term rights of use in MBSA2.

#### Quantum of spectrum?

- 4.27 This licensing aspect concerns the quantum of spectrum rights of use made available to each Incumbent Licensee.
- 4.28 DotEcon recommends that to support the continuation of rights of use that could be required for providing existing services during the interim period, MNOs should have the option to apply for up to the amount of spectrum currently held.
- 4.29 ComReg agrees with this approach as making available a quantum below what is currently assigned to these Licensees risks consumer disruption.
- 4.30 In relation to both the 700 MHz Band and the 2.1 GHz Band, there are scenarios where unused blocks are or could become available. For example:
- two 2 x 5 MHz blocks of 2.1 GHz spectrum are currently unused following the expiry of Three's A licence and its decision to take only one block under an interim A licence; and
  - where any MNO does not take up a short-term licence for all of the spectrum it currently uses.

- 4.31 With that in mind, DotEcon advises that there is no basis for providing MNOs

with access to more spectrum than they currently have on the grounds of service continuity and avoiding consumer disruption prior to the award of long-term licences.

- 4.32 ComReg agrees that assigning additional rights of use above existing holdings would go beyond addressing the policy issues considered in this RIA. MNOs should have the option to get up to the amount they already hold because that is what may be necessary for service continuity. However, there is no consumer disruption justification for accessing additional rights of use and the release of same could potentially distort competition prior to the award of long-term rights in MBSA2.
- 4.33 Therefore, ComReg is of the preliminary view that any regulatory option should only consider an amount of spectrum which is no greater than the existing rights held by Incumbent Licensees. This gives incumbent licensing the option to maintain holdings of spectrum in current use for the purposes of service continuity and, in turn, avoid significant consumer disruption.

#### **What frequency position?**

- 4.34 DotEcon recommends that the specific frequency assignment associated with a short-term licence should fall within the frequencies currently licensed by the operator in the relevant band due to the potential that this could affect the position of other parties bidding for spectrum in the subsequent auction.
- 4.35 ComReg agrees with DotEcon and notes that there is no obvious rationale for amending the current frequency assignments in the present case. Indeed, if existing rights of use are not granted to MNOs in the same frequency positions as they are currently held, a transition process would be required to allow some, or all MNOs migrate from existing frequencies. Immediate consumer disruption could occur while transition to new frequencies (e.g., retuning of frequencies) is being carried out. Further, as noted above, ComReg does not wish to risk compromising the assignment stage for MBSA2, and it would be premature to allow any transition of frequencies to occur before the assignment of long-term rights of use.
- 4.36 Therefore, ComReg is of the preliminary view that any regulatory option should consider rights of use made available to each Incumbent Licensee that would be located within the same frequency position as they are currently held.

#### **Auction or administrative assignment**

- 4.37 In relation to the MBSA2, ComReg previously assessed the possibility of an administrative assignment of 700 MHz and 2.1 GHz rights of use in its Assignment Process RIA. Therein, and among other things, ComReg noted

that an auction would avoid issues around having to make any ex-ante determinations on each of the licensing aspects where ComReg would not have perfect information.

- 4.38 However, in this case and as DotEcon notes, the short-term assignment very clearly leads to an administrative award of short-term licences, rather than a competitive process. DotEcon notes that if short-term licences are granted only to the MNOs and only in relation to their existing spectrum holdings, there can be no scope for a conflict in demand for any of the available licences, and there is therefore no need for a process to resolve that.
- 4.39 ComReg agrees that an administrative award is most appropriate for this assignment. The main policy objective here is the avoidance of consumer disruption that would arise over a short period following the expiry of existing rights of use (subject to not creating distortions to MBSA2). Given the above, each of the potential licensing aspects can be addressed in a relatively straightforward manner in the current case and there is no need for an auction to determine the most appropriate assignment of short-term rights of use. Indeed an open auction could result in outcomes that could cause short term consumer disruption if entities other than existing incumbents won those licences. Further it is likely not feasible to complete an auction in advance of expiry of licences.
- 4.40 Therefore, ComReg is of the preliminary view that the use of auction is not appropriate to determine the assignment of short-term rights of use and the options in this RIA should only consider administrative assignments.

### **Identifying regulatory options**

- 4.41 Considering the preceding discussion, ComReg notes that the following options are available to it.
- **Option 1** is the 'do nothing' option and involves ComReg taking no regulatory action and allowing existing 700 MHz and 2.1 GHz rights of use expire in October.
  - **Option 2** is to make available spectrum rights of use as follows:
    - Short-term liberalised rights of use in the 700 MHz and 2.1 GHz Bands would be made available to each MNO;
    - The short-term liberalised rights of use made available to each MNO would be no greater than the existing holdings held by each MNO in the 700 MHz and 2.1 GHz Bands; andShort-term liberalised rights of use made available to each

MNO would be located within the same frequency position as they are currently held in the 700 MHz and 2.1 GHz Bands.

## 4.4 Impact on industry stakeholders, competition and consumers (Steps 3 and 4)

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

- i. industry stakeholders;
- ii. competition;
- iii. and consumers.

### 4.4.1 Impact on Industry Stakeholders

4.43 Industry stakeholders can be broadly split between MNOs and other operators currently active in the electronic communications sector and potential new entrants that may be considering entry into the electronic communications sector in the State. In that regard, ComReg sets out below the relevant stakeholders and some high-level observations on their likely requirements:

- MNOs (Vodafone, Three and Eir) who already have existing spectrum holdings in both the 700 MHz and 2.1 GHz Bands;
- MVNOs who provide services using the networks of the MNOs. There are five MVNOs – two (An Post and Sky) use the Vodafone network and three use the Three network (Tesco, Virgin and Lyca); and
- Other licenced operators and new entrants.

#### ***MNOs***

4.44 In relation to the MNOs, the extent to which each of the MNOs use both the 700 MHz and 2.1 GHz bands is described in Chapter 3 and summarised below:

- Vodafone contends that its use of the 2.1 GHz Band is mainly concentrated in towns and cities and the spectrum accounts for [ ✕ ██████████ ✕ ] of Total Network Data Traffic and [ ✕ ██████████ ✕ ] of total

VoLTE traffic<sup>41</sup>;

- Vodafone maintains that it has over [ X █████ X ] of 700 MHz live on the network which carries [ X █████ X ] of Total Network Data Traffic and [ X █████ X ] of Total Volte traffic. In Rural/Suburban areas 700 MHz accounts for [ X █████ X ] of Data Traffic and [ X █████ X ] of VoLTE traffic<sup>42</sup>;
- Three states that it has rolled out the 2.1 GHz Band on [ X █████ X ] sites and currently carries over [ X █████ X ] of Three's 4G traffic. The function of 2.1 GHz Band is primarily to provide 4G data capacity service in suburban and urban areas, although it is also used to a lesser extent for provision of voice 3G service;
- Three contends that it uses the 700 MHz Band for coverage and capacity for 4G service in rural and suburban areas. Three currently operates 700 MHz spectrum from [ X █████ X ] which can provide 4G coverage service to over [ X █████ X ] of the population. Three maintains that almost [ X █████ X ] customers of Three and its MVNOs can benefit from coverage provided by this band. Over [ X █████ X ] of all 4G traffic is carried on the 700 MHz band;
- Eir states that it utilises the 2.1 GHz Band for the provision of enhanced data services for customers and has activated LTE 2100 on [ X █████ X ] upgraded sites under the temporary license arrangement. On a national basis, [ X █████ X ] of Data traffic and [ X █████ X ] of voice traffic is supported on the 2100 MHz band. In urban areas, there is a greater dependency on the 2100 MHz band with [ X █████ X ] of data traffic and [ X █████ X ] of voice traffic supported on the band; and
- Eir contends that in the 700 MHz Band, it has deployed active services across [ X █████ X ]. On a national network basis [ X █████ X ] of data traffic and [ X █████ X ] of voice traffic is supported on the 700 MHz band. There is a greater dependency in Rural areas where [ X █████ X ] of Data traffic is supported on the 700 MHz band.

4.45 Under Option 1, Eir, Three and Vodafone would appear to be unable to deliver the services described above using the 700 MHz and 2.1 GHz Bands.

<sup>41</sup> The band is used for LTE at those sites where there is a high traffic demand. This has proved to be highly beneficial for customers with customers typically experiencing [ X █████ X ] higher data throughput at these sites than they did when 3G was used.

<sup>42</sup> Vodafone submits that the higher proportion of usage in Rural/Suburban areas arises because Mid/High Band Frequencies struggle to meet customer requirements.

In such circumstances, the operators would then have a choice of operating with reduced network capacity and/or attempting to re-dimension their network to mitigate for the expiry of existing rights of use. For example:

- Vodafone contends that should temporary rights not be extended in the 2.1 GHz Band, it would not be in a position to reconfigure existing networks to provide a service equal to the current network. In effect, it would be removing [ ✂  ✂ ] of the installed cell capacity so this would have a detrimental impact on customers.
- Three contends that if short term licences are not made available, then it will be necessary for network operators to re-configure networks to maintain current services. Three claims that such a re-configuration of networks would require the reduction of spectrum available for 5G services today and would therefore set-back its development in Ireland.

4.46 To the extent that operators intend to re-dimension their network as described by Three, ComReg notes that such a strategy is not a costless exercise and would require investments that would not ordinarily be needed and may need to be unwound following the assignment of long-term rights of use in MBSA2. Further, such an approach may only partially address any consumer disruption.

4.47 Regardless of the approach taken by operators under Option 1, customers relying on these services would likely experience immediate consumer disruption such as those claimed by Vodafone (e.g., disruptive degradation in call connection, call-setup time, dropped call rate and data connectivity and throughput rate). Such disruption could lead to a significant increase in consumer complaints that would need to be handled for all operators and likely result in reputational damage.

4.48 ComReg notes that the impacts on Eir may be less because its 2.1 GHz rights of use are assigned until 2027 and it has the option to liberalise those rights outside any short-term licensing regime. Regardless, Eir faces the same issues as Vodafone and Three in relation to the 700 MHz Band.

4.49 Under Option 2, any such impacts would be avoided because each of the MNOs could continue providing the services as described above for the period between the expiry of the 700 MHz and 2.1 GHz rights of use and the commencement of long-term rights of use through the MBSA2. Therefore, ComReg is of the preliminary view that each of the MNOs would prefer Option 2.

### **MVNOs**

- 4.50 Under Option 1, short term degradation in the capacity of the MNOs to carry MVNO services is likely to damage their competitive position in the short term especially as the two operators facing imminent licence expiry in the 2.1 GHz Bands are the only two networks currently supporting MVNOs. MVNOs could also experience a significant increase in consumer complaints leading to reputational damage.
- 4.51 Accordingly, ComReg considers that the MVNOs would likely prefer Option 2 to avoid the same consumer disruption issues as their residing networks.

### **Other licensed operators and new entrants**

- 4.52 Other operators and new entrants are likely to be indifferent between Options 1 and 2 given that the rights of use in question are for a short term only. For example, Imagine may prefer Option 2 because under Option 1, MNOs may have a greater requirement for 3.6 GHz rights of use, some of which are currently leased to Imagine<sup>43</sup>. Alternatively, some of these other operators may favour Option 1, if they perceive that access to short-term rights of use gives MNOs a competitive advantage over them at the margin (e.g. FWA competing with mobile broadband).
- 4.53 It is worth noting that these stakeholders can compete on the margin with mobile operators (e.g., such as fixed services including Fixed Wireless, even if those services might not formally fall into the same relevant market). All such operators regardless of which option they prefer in this RIA, are likely to have concerns about the price at which those rights of use are provided. Even where such operators prefer Option 2, these operators are unlikely to want MNOs to benefit unreasonably or want competition between them and the MNOs distorted through the assignment of rights of use at a low price.
- 4.54 Fees are discussed separately in the Chapter that follows this RIA.

## **4.4.2 Impact on competition**

- 4.55 As noted in Chapter 1, the current situation of having to grant short term rights of use on an administrative basis is not good for competition and at best it sits uneasily with ComReg's statutory obligations and objectives, in particular that of promoting competition. ComReg's preferred option has always been to proceed with the long-term assignment of rights of use in the MBSA Bands.

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<sup>43</sup> For example, Imagine is currently leasing 3.6 GHz rights of use from Eir and Vodafone. See [ComReg Document 22/64](#), "Spectrum Lease Determination: Lease of spectrum rights in the 3.6 GHz band from Meteor Mobile Communications Limited and Vodafone Ireland Limited to Imagine Communications Ireland Limited", published 25 July 2022, available at [www.comreg.ie](http://www.comreg.ie)

However, this Option is not available because of the judgement of Mr Justice McDonald which has necessitated a proposed administratively determined decision focussed on MNO's so as to avoid any consumer disruption. With that in mind, ComReg notes that this RIA simply compares the assignment of short-term rights of use with the option of doing nothing and letting rights of use expire – the only two options available in the circumstances.

- 4.56 Solely within that context, ComReg notes that Option 2 is, on balance, less bad for competition than Option 1 because, unlike Option 1 which risks destabilising the market at least in the short term to the detriment of consumers, Option 2 simply maintains the status quo from a competition perspective.
- 4.57 For the reasons stated above, ComReg is of the view that Option 2 is preferable over Option 1 in terms of the impact on competition.

#### 4.4.3 Impact on consumers

- 4.58 Consumers attach enormous value to the continuous availability of mobile services and the potential adverse impact on consumer welfare if disruption were to occur could be very high. Consumers would likely prefer options that avoid significant disruption to existing services and safeguard existing competition in the mobile markets concerned until such time that ComReg can complete its broader spectrum release proposals in a manner which would not distort competition. Chapter 3 clearly sets out the consumer disruption issues that MNOs believe could arise under Option 1 and consumers would likely prefer to avoid such outcomes.
- 4.59 All three MNO's contend that the expiry of rights of use under Option 1 would lead to consumer disruption. For example, and among other things, Three maintains that Option 1 would:
- cause a significant degradation in the quality of and availability of mobile service in Ireland, with consequent disruption for consumers;
  - be noticed by end users as reduced quality of service including cases where service would no longer be useable at all;
  - impact an estimated [ ✂ [REDACTED] ✂ ] customers of Three and its MVNOs can benefit from this coverage at present;
  - harm rural customer disproportionately because the 700 MHz band is of much more importance to people in rural areas and would account for a higher proportion of rural traffic; and
  - severely impact on the quality of data service provided to customers

over 4G and would also have an impact on voice service.

4.60 Eir maintains that there is a very significant dependency on the availability of both 700 MHz and 2.1 GHz rights of use and a massive risk of a serious degradation in customer experience to the entire Eir customer base if spectrum availability is constrained in any way. Similarly, Vodafone contends that:

- Customers in high traffic demand areas using 2.1 GHz would notice a severe disruptive degradation in call connection, call-setup time, dropped call rate and data connectivity and throughput rate.
- Without the 700 MHz Band remote workers and customers in congested areas of rural Ireland would face significant service issues. The expiry of 700 MHz would remove the stability provided in the last 2 years to ensure connectivity standards have been maintained throughout more rural locations.

4.61 ComReg agrees that the expiry of 700 MHz and 2.1 GHz rights of use under Option 1 could create consumer disruption. While there is some degree of uncertainty about the extent of the disruption across different operators, large numbers of consumers could experience a degradation in coverage and quality of service. Further, while operators could take measures to mitigate this disruption, any such measures might prove insufficient. In any event, it is unlikely that some of these measures could be put in place prior to expiry of existing rights of use.

4.62 Alternatively, Option 2 is a precautionary approach which effectively removes the possibility of consumer disruption for the duration of the short-term licence. Therefore, on the assumption that Option 1 could cause the disruption claimed by the MNOs, there is little doubt that consumers would prefer Option 2 over Option 1.

4.63 ComReg also notes that consumers would only prefer Option 2 in the current exceptional circumstances. Ultimately, consumers would likely prefer that long term rights of use are assigned in an open competitive as soon as possible. This would have the most positive impact on downstream retail competition in the long run and should therefore promote the interests of consumers in terms of the choice, price, and quality of electronic communications services.

## 4.5 Preferred option – Assignment Process RIA (Step 5)

4.64 This assessment has considered the impact of the various options from the perspective of industry stakeholders, as well as the impact on competition

and consumers.

- 4.65 For the reasons outlined in this RIA, ComReg is of the preliminary view that the preferred option identified under the short-term assignment RIA is Option 2.
- 4.66 ComReg notes that this preferred option has been formed based on Incumbent Licensees being best placed to address the consumer disruption arising from the expiry of existing 700 MHz and 2.1 GHz rights of use. ComReg considers it unlikely that other operators would be able to address this consumer disruption at such short notice and given the limited duration because it involves issues of service continuity that are relevant to Incumbent Licensees only.
- 4.67 However, ComReg is open to the possibility that operators other than the incumbent MNOs may contend that they would also be able to mitigate any disruption to services that MNO customers would experience if they were granted some of these rights of use instead of an MNO. In that regard, ComReg notes that any request from such operators should be justified based on the following,
- i. How any consumer disruption issues would be addressed by it through the assignment of rights of use in the 700 MHz and 2.1 GHz rights of use.
  - ii. the quantum of spectrum that would need to be assigned in the 700 MHz and 2.1 GHz Bands to address the consumer disruption.
- 4.68 ComReg would consider any justified request received from Interested Parties and determine whether an assignment to other operators would be appropriate.

## Chapter 5

# 5 Fees and Licence Conditions

## 5.1 Introduction

- 5.1 As discussed in Chapter 4 above, the overall preferred option in the Short-term Assignment RIA is to make available short term liberalised rights of use on the following basis:
- Rights of use in the 700 MHz and 2.1 GHz Bands would be made available to each MNO;
  - The rights of use made available to each MNO would be for an amount of spectrum no greater than the existing holdings held by each MNO in the 700 MHz and 2.1 GHz Bands on 1 October 2022; and
  - The rights of use made available to each MNO would be located within the same frequency ranges currently held by that MNO.
- 5.2 ComReg must now determine the appropriate fees to attach to short-term rights of use, noting that the fees determined in this Chapter would be applicable to any entity assigned rights of use. However, it is important to recall the exceptional background to this consultation, namely the fact that Mr. Justice McDonald granted an order staying the implementation of the MBSA2 process, thereby suspending ComReg from commencing an auction which would have been used to determine (i) an efficient assignment of spectrum rights of use in the 700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands and (ii) the fees that would apply to those rights of use. Further, as discussed in the RIA above, an auction is not possible for the assignment of short-term rights of use and, in turn, the setting of appropriate spectrum fees. As a result, ComReg must now make an administrative decision in terms of the appropriate fees to be attached to relevant rights of use.

### **Preliminary observations on the setting of fees**

- 5.3 In accordance with Regulation 19(1) of the Authorisation Regulations, ComReg is permitted to impose fees for rights of use for radio frequencies which reflect the need to ensure their optimal use. In the normal course, ensuring that operators make optimal use of scarce resources essentially means that fees are set at an appropriate level to reflect the value of the use of those resources, having regard to any significant factors determining that value. In that regard, there is little doubt that rights of use for scarce resources, such as the spectrum bands in question, enable the holder of

those rights to make significant economic gains<sup>44</sup>.

- 5.4 Save in exceptional circumstances such as the Temporary ECS Licensing Framework or in the case of bespoke transient licensing frameworks for which commercial exploitation is not the principal purpose (e.g., Test and Trial Ireland<sup>45</sup>, Transition Licences), ComReg has consistently approached the setting of fees for rights of use in the 700 MHz, 2.1 GHz and similar bands<sup>46</sup> (whether for temporary or long-term rights) by reference to the market value of those rights of use.
- 5.5 In approaching the issue of determining an appropriate fee structure for short-term licences, ComReg will consider the above factors as well as the need to ensure that such fees are objectively justified, transparent, non-discriminatory and proportionate.

## 5.2 Overview responses to Document 22/63 in relation to fees

- 5.6 In its submission, Eir contends that temporary or short-term rights should be provisioned on an administrative fee basis used in for Temporary ECS Licensing Framework. Eir provides no supporting evidence or rationale for this view. Eir also opines that once the long-term award process is concluded all fees should be effective from 15 October 2022 and backdated as appropriate.
- 5.7 In its submission, Three opines that there a number of different precedents and previous learnings that ComReg could draw on for guidance, including:
- Other temporary licences – which apply nominal fees. Three suggests that this could be used in the present case;
  - Administrative cost recovery – which set fees by reference to the administrative costs of providing the licence. Three suggests that this could be used in the present case;
  - Opportunity cost – Three argues that because there is no alternative demand for spectrum beyond existing use, opportunity cost is zero in the present case and so ComReg should instead use one of the above two approaches: and
  - Commercial Value – Three contends that there is no established commercial value for such short-term licences. If ComReg was to seek

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<sup>44</sup> As noted in Recital 107 EECC, radio frequencies have an “important public and market value”.

<sup>45</sup> See <https://www.testandtrial.ie/>

<sup>46</sup> For example, the 800 MHz, 900 MHz, 1800 MHz and 3.6 GHz Bands.

a proxy for such value, then the only established reference would be the Spectrum Usage Fee that will apply to this spectrum following the award. This has been consulted on by ComReg previously and could be adopted on a pro-rata basis to the duration of the short-term licences to provide a proxy value for a licence fee. However, Three contends that it would not be appropriate to include a component of the Spectrum Access Fee in the short-term licences as, in its view, this component of the fee from the long-term licences solely reflects the value to licensees to obtain a 20-year licence and that does not apply in this case as licensees merely get short-term use of the spectrum.

- 5.8 Whilst Three evidently prefers the use of nominal or administrative fees, it does clearly acknowledge the possibility of fees based on commercial value and opines on the methodology for calculating same.
- 5.9 In its submission Vodafone contends that “[T]he simplest way to allocate for this short-period of a few months, taking into account case is to continue allocations on existing conditions and spectrum usage fees for the short period required” and that “[T]his is the best way to ensure continuity of service for customers through a tried and tested allocation process”. Whilst not entirely obvious from its statement above, it appears that Vodafone favours the application of nominal fees as per the Temporary ECS Licensing Framework.

### 5.3 Approach to setting fees

- 5.10 ComReg considers the following three approaches for administratively setting fees for short-term rights of use in the 700 MHz and 2.1 GHz Bands:
- (i) Setting fees by reference to a current estimate of market value.
  - (ii) A nominal fee of €100 such as those used in the Temporary ECS Licensing Framework,
  - (iii) A continuation of the fees that are already being paid by MNOs for existing rights of use in the 2.1 GHz Band<sup>47</sup>.

- 5.11 ComReg notes that in assessing each of these options there are overlapping

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<sup>47</sup> A related approach suggested by DotEcon would be to use fees from substitutable spectrum assigned in MBSA1. This would allow for fees based on prices achieved in substitutable bands in the context of the Irish market (i.e., the price of 700 MHz would be set by reference to 800/900 MHz spectrum). However, ComReg agrees with DotEcon that given developments in technology and market conditions over the last 10 years, it cannot be assumed that prices achieved in 2012 are reflective of market prices that would be achieved in substitutable bands today. This approach is also sub-optimal given the presence of relevant 700 MHz benchmarks.

issues and the assessment of its preferred approach was made having considered all approaches together.

### 5.3.1 Fees based on market value

5.12 DotEcon advises that there is a strong case for fees to be based on an estimate of the likely market value of the spectrum, and these reasons are all ultimately related to ensuring that spectrum is used optimally given the circumstances pertaining over the short-term duration of the licence. These are provided in Section 3.5 of the DotEcon report but can be summarised as follows.

5.13 **First**, setting fees below an estimate of the likely market value may lead to distortions of competition. For example:

- It could lead to distortions of competition between MNOs and other operators who compete at the margin for certain services that are delivered using these frequencies (e.g., fixed wireless/broadband or fixed broadband); and
- It could potentially distort competition amongst the three MNOs by providing Vodafone and Three with access to comparable 2.1 GHz spectrum considerably below the price currently paid by Eir for its existing 2.1 GHz licence during the period of any short-term licensing regime.

5.14 **Second**, allowing access to these bands for fees significantly below likely market value risks distorting efficient long-run investment decisions by operators. DotEcon notes that an operator might commit to retaining spectrum in a band when it might have sought less or switched to a different band had the MBSA2 auction been run according to its original timetable, and this decision might become locked-in if associated sunk investment in network equipment is made. DotEcon advises that charging the likely market value is necessary if MNOs are to have the correct incentives to continue to make efficient decisions now concerning their long-run spectrum positions.

5.15 ComReg agrees with DotEcon that if these bands were made available at a price lower than an appropriate estimate of market value, it could result in distortions to competition between mobile services and other forms of connectivity. Clearly, if the use of the spectrum results in distortions to competition, then the optimal use of the spectrum would not be provided for in line with ComReg's statutory objectives<sup>48</sup>. Fees set below market value

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<sup>48</sup> ComReg notes that in more normal circumstances, such as MBSA2, an open competition with spectrum competition caps would provide protections against such concerns. These measures

would not provide for the optimal use of those frequencies and could hinder competition on the market. To ensure the optimal use of the radio spectrum, fees must be set at an appropriate level to reflect the value of spectrum being assigned.

- 5.16 Further, ComReg is conscious that it should not risk distortions to the efficient assignment of the spectrum and should be cognisant of the objectives associated with the longer-term assignment of important spectrum rights of use (including the optimal use over that period). In that regard, ComReg agrees that providing spectrum rights of use at a price below its market value could cause operators to make decisions about the use of the spectrum in the short run based on fees that are not sustainable in the longer run. Such decisions could result in investments that are not sustainable in the long run and would be inefficient.
- 5.17 Further, ComReg also notes that rights of use are only being made available, and the actual assignment will be determined by operators based on how much spectrum (if any) in each band is required to prevent consumer disruption. If rights of use are assigned to operators for reasons other than consumer disruption, it could create distortions to the MBSA2<sup>49</sup> and lead to situations where spectrum is assigned inefficiently. Fees therefore have an important role in promoting this objective.
- 5.18 Fees can influence an operator's decision about whether it wants to be assigned rights for that purpose or hold it for other unrelated reasons. Fees set below the market value would incentivise operators to avail of the spectrum only because it is provided at a low price. Alternatively, fees set at market value would encourage MNOs to consider their spectrum requirements at the outset and provide incentives to return rights of use to ComReg at the end of the 3-month period if it was not using it or did not require it any longer.
- 5.19 ComReg also notes that each of the MNOs have invested in the 700 MHz Band and liberalised 2.1 GHz Band across the State and these bands are being used to deliver services to consumers across the State. For example:

*“eir has made extensive and continued investment in the mobile network over the last 4 years focusing on enhancing mobile service experience for customers, especially at a time when connectivity matters most. As part of the investment, eir has utilised the Temporary*

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cannot be implemented here given the need to prevent likely immediate and significant consumer disruption.

<sup>49</sup> Giving operators access to spectrum that is not needed to prevent consumer disruption could affect the potential distribution of all supra-1 GHz spectrum in MBSA2 by distorting the potential for outcomes which might have resulted in 2.3/2.6 GHz being assigned instead.

Licensing arrangements for both 700Mhz and 2100Mhz". [Emphasis added]

*While these licences were originally issued in response to the situation developing during the Covid-19 pandemic, it is nonetheless a fact that they have been in place for a continuous period of over two years now. During that time, mobile network operators have built-out significant networks using the 700MHz band which provides a valuable component of connectivity throughout the country today, especially in rural areas" [Three submission to Document 22/63, Emphasis added]*

- 5.20 These investments (even to existing sites) are unlikely to have been made with a view to them being unwound once the Temporary Situation arising from COVID-19 ended. Therefore, certain investments have already been made (and services offered) that ordinarily would have been delayed until the long-term assignment in the MBSA2 was complete. It is clear that the MNOs would continue to use a scarce spectrum resource to make potentially significant economic gains compared with other operators who are either competing at the margin or wish to deliver services using other rights of use (2.3 GHz and 2.6 GHz) whose release is now delayed. This further justifies imposing fees which reflects the market value of the rights of use being made available.
- 5.21 Therefore, ComReg is of the preliminary view that fees should be set based on an estimate of market value as this is best aligned with the objective of ensuring the optimal use of the radio spectrum.
- 5.22 In forming this view, ComReg has had regard to two other alternative fees approaches discussed in turn below.

### 5.3.2 Nominal fees

- 5.23 Whilst Three acknowledges the possibility of fees based on commercial value, all three MNOs have suggested that nominal (or administrative) fees might also be appropriate in the current circumstances. However, DotEcon does not recommend this approach because it would result in fees for short-term licences that are significantly below the market price. In summary, DotEcon notes that:
- fees set below market price would give benefits to the MNOs that are not available to others solely because of a necessary administratively determined decision to restrict short-term licences to only the MNOs in order to prevent consumer disruption;
  - Setting very low fees (at, or close to zero) would risk distorting

competition at the margin between mobile and other services;

- Very low prices for 2.1 GHz short-term licences would create an asymmetry in prices paid by Vodafone and Three relative to Eir for comparable spectrum, potentially distorting competition amongst MNOs; and
- Allowing access to the spectrum for a fee significantly below market value risks distorting long-run investment incentives, leading to suboptimal use of spectrum in the long run.

5.24 Further, DotEcon notes that Three's argument that the opportunity cost of the spectrum is essentially zero because no operators other than the MNOs can use this spectrum is incorrect. DotEcon points out that the only reason that spectrum would not be available to others is because of a decision to make short-term licensing available only to the MNOs, on the assumption that the MNOs are best placed to prevent the consumer disruption that could arise because of the delayed assignment of long-term rights of use in the 700 MHz and 2.1 GHz bands following the Court approved stay.

5.25 ComReg agrees with the views of DotEcon and notes that this situation arises solely because of the judgement of Mr Justice McDonald which has necessitated a proposed administratively determined decision focussed on MNO's to avoid any consumer disruption. ComReg also notes that assigning rights of use at a nominal price (i.e., below the market price) is not appropriate for the same reasons as set out in Section 5.3.1 above.

5.26 In relation to the approach taken in the COVID-19 Temporary ECS Licensing Framework where fees were set at €100, ComReg notes that it considered at the time that this approach to fees under that framework best provided for the optimal use of the radio spectrum but only within the context of the exceptional circumstances surrounding that temporary assignment for the period of the COVID-19 emergency. Readers are referred to paragraphs 3.61 - 3.66 of Document 20/21 where ComReg outlines its approach in respect of both bands.

5.27 Three contends that the opportunity cost of the spectrum subject to short-term licences is essentially zero because there is no alternative demand for the spectrum beyond existing use. In that regard, ComReg reiterates the views of DotEcon that such an argument is incorrect because the only reason that spectrum would not be available to others is because of a decision to make short-term licensing available only to the MNOs, on the assumption that the MNOs are best placed to prevent the consumer disruption that could arise as a result of the delayed assignment of long-term rights of use in the 700 MHz and 2.1 GHz bands following the Court approved stay.

- 5.28 ComReg agrees with DotEcon that Three's argument is incorrect and notes that such an approach is simply a construct used by Three to justify little or no fees for the use of an important and valuable spectrum resource and arises only because because of the judgement of Mr Justice McDonald which has necessitated a proposed administratively determined decision focussed on MNO's solely to avoid any potential for consumer disruption. As Three knows, this situation would not have arisen if ComReg was able to proceed with the long-term assignment process.
- 5.29 Further, ComReg notes that the current situation is comparable with a similar exceptional circumstance ComReg faced in 2017<sup>50</sup> when it had to estimate spectrum fees without the use of a market mechanism. In that matter, ComReg had to contend with having to set fees that ensure the optimal use of spectrum where those rights of use to that spectrum were assigned administratively by a separate entity that did not use a competitive award process to determine fees. In that case, and on foot of advice provided by DotEcon<sup>51</sup>, ComReg also rejected the option that only administrative costs would apply because opportunity costs were effectively zero – arising from the assignment (but not pricing) decision taken by the European Commission.
- 5.30 Absent ComReg's approach, that would have resulted in mobile satellite services ("MSS") licensees being assigned valuable 2 GHz spectrum at a price likely to be significantly below the opportunity cost of the spectrum and with a competitive advantage if either MSS licensee decided to provide services that could compete at the margin with those offered by MNOs. ComReg agreed with DotEcon that despite the implied opportunity cost of zero under the circumstances, that spectrum should not be treated differently to other spectrum bands and spectrum charges should be based on the market value of the spectrum. Absent same, MSS licensees would have enjoyed access to a valuable essential input substantially below its market value.<sup>52</sup>
- 5.31 In any event, the reasoning put forward by Three would lead to the unsustainable notion that fees for any short-term licences (whose primary purpose is to prevent consumer disruption and/or to facilitate the efficient long-term assignment of the relevant rights of use e.g., to enable co-

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<sup>50</sup> [ComReg Document 17/97](#), 'Mobile Satellite Services with Complementary Ground Component Authorisation Regime - Response to Consultation and Final Decision' published 27 November 2017. Available at [www.comreg.ie](http://www.comreg.ie)

<sup>51</sup> [ComReg Document 17/19a](#), 'DotEcon Report - Pricing of Satellite Complementary Ground Component' published 20 March 2017. Available at [www.comreg.ie](http://www.comreg.ie)

<sup>52</sup> In that assignment, ComReg used a benchmark of €0.25 as likely to be the most relevant for making a conservative estimate of the opportunity cost of the 2 GHz MSS/CGC spectrum. This is effectively the same estimate recommended by DotEcon in this consultation.

termination) should always be priced nominally because the only relevant operators are those providing existing services (implying a zero-opportunity cost). The clearly obvious and long-term implications of such an approach would be to incentivise incumbent licensees to seek delay to awards for long-term spectrum rights of use (through legal proceedings or otherwise) safe in the knowledge that short-term licences for valuable spectrum rights of use would be provided for a nominal fee. Three will be aware that fees for previous short-term licences issued for MBSA2<sup>53</sup> and MBSA1<sup>54</sup> were not set nominally and there is no reason to deviate from this approach.

- 5.32 ComReg is therefore of the preliminary view that nominal fees are not appropriate for the proposed short-term assignment.

### 5.3.3 Short-term Fees for 2.1 GHz band based on existing licence fees

- 5.33 This approach refers to setting fees for the 2.1 GHz band based on the fees that currently apply to the 2.1 GHz Band and which are due to expire. The issue of setting fees for the 700 MHz band based on existing licence fees is not considered here, as this has already been considered above.

- 5.34 ComReg notes that there is some merit in using this approach for the setting of 2.1 GHz band fees. Indeed, such fees have recently been used for Three's 2.1 GHz interim licences (see Annex 5 – Document 20/122). However, ComReg observes that those fees were put in place for a defined period (83 days and 14 days respectively) for the purpose of aligning the expiry dates of its existing 2.1 GHz licences (comprised of Three's existing "Licence A" and "Licence B" which expire on 24 July 2022 and 1 October 2022, respectively) with Vodafone's existing 2.1 GHz licence which expires on 15 October 2022, such that the above three 2.1 GHz Band licences would expire on 15 October 2022.

- 5.35 The approach set out in Annex 5 was chosen to, among other things<sup>55</sup>, promote the principle of regulatory predictability which ComReg is required to apply in its pursuit of its statutory objectives. In that regard, ComReg considered that it was reasonable and appropriate to adopt a consistent approach between the 2.1 GHz interim fees in MBSA2 which were based on

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<sup>53</sup> Annex 5 of Document 20/122 set interim fees for Three's interim licence which was required for aligning existing spectrum rights of use in the 2.1 GHz Band to facilitate the efficient long-term assignment of those expiring rights of use.

<sup>54</sup> See [ComReg Document 11/29](#), "Response to Consultation and Decision: Interim Licences for the 900 MHz Band", published 13 April 2011. Available at [www.comreg.ie](http://www.comreg.ie)

<sup>55</sup> In particular, the payment of appropriate spectrum fees for the proposed Interim A and B Licences to ensure that no distortions to competition would arise from the terms under which said licences would be granted;

existing 2.1 GHz fees, and the previous interim licensing fees in MBSA1 for the 900 MHz and 1800 MHz Bands which were based on existing GSM fees.

- 5.36 However, there are two main differences between that approach and the proposed short-term assignment proposed here.
- 5.37 **First**, DotEcon previously advised that it is unlikely that the market price of the 2.1 GHz spectrum determined in this award will be above the fees for existing 2.1 GHz licences<sup>56 57</sup>.
- 5.38 This raises the question about whether the use of existing fees is reasonable and appropriate in the current exceptional circumstance where such fees could adversely affect the extent to which certain services are provided over the proposed period. This scenario was less relevant in MBSA2 because if Three decided not to use interim rights of use for its A Licence, it would still have had 2 x 15 MHz to deliver services until 1 October 2022 (where the fees between then and commencement of MBSA rights of use was for just 15 days).
- 5.39 As noted by DotEcon, such fees could be viewed as excessive and unreasonable and could lead to short-term licences being turned down or returned to ComReg. On that basis, DotEcon suggests that in these specific circumstances there is likely to be a greater benefit from using fees that are more in line with estimated current market prices rather than applying consistency with past approaches to interim licences.
- 5.40 **Second**, ComReg notes that it is not assigning interim 2.1 GHz rights of use independently of other bands. Fees for short-term 700 MHz rights of use are being set by a reference to market value. The use of existing fees in 2.1 GHz in the same short-term assignment would create a situation where the fees for the 700 MHz Band are set by reference to market value, while fees for the 2.1 GHz Band are not. This issue did not arise in MBSA1 where the interim fees for both the 900 MHz and 1800 MHz Bands were based on existing GSM fees, or MBSA2 where only 2.1 GHz rights of use required interim rights.
- 5.41 Therefore, ComReg is of the preliminary view that the use of existing fees

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<sup>56</sup> See page 29 of Document 19/59a, Page 29 of Document 19/124a and Page 26 & 28 of Document 20/122a.

<sup>57</sup> However, DotEcon also cautioned that there were no guarantees and prices for the 2.1 GHz rights in the Proposed Framework rising beyond the level of the current fees was not impossible. Indeed, Eir's reluctance to liberalise existing 2.1 GHz rights of use indicates that there remains a limited possibility that prices may replicate existing fees. (i.e., If Eir agreed that new 2.1 GHz rights of use were not going to go above existing 2.1 GHz fees it would likely have liberalised its existing rights of use).

would not be appropriate for this proposed short-term assignment.

### 5.3.4 ComReg's preliminary view

5.42 Considering the above, ComReg holds that setting fees based on the market value of the spectrum would best achieve the objective of ensuring the optimal use of the spectrum in this proposed assignment process. Alternative approaches such as nominal fees or existing fees (discussed above) would run the risk of distortions to competition and/or the spectrum not being used to prevent consumer disruption, neither of which would ensure the optimal use of the spectrum.

5.43 In the section that follows, ComReg considers the most appropriate methodology to determine such market value-based fees.

## 5.4 Methodology for estimating fees based on market value

5.44 ComReg has previously determined spectrum fees by reference to an estimate of market value. ComReg does not have a revenue raising objective and setting market-based fees by reference to opportunity costs is best aligned with ComReg's objectives, where such fees are objectively justified, transparent, non-discriminatory, and proportionate in relation to their intended purpose and consider the objectives of ComReg as set out in Section 12 of the 2002 Act and Regulation 16 of the Framework Regulations.

5.45 With that in mind, there are three main approaches<sup>58</sup> to estimating the market value of the radio spectrum in the current case:

- I. Business modelling where ComReg would build a valuation model to simulate the outcome of a competitive award process. This approach involves constructing high-level business cases for likely bidders. The incremental profits of the operator from these business cases will provide an indication of the buyer's willingness to pay for the spectrum<sup>59</sup>;
- II. Apply prices to the 700 MHz and 2.1 GHz Bands that have been estimated retrospectively based on the outcome of the MBSA2 ("Retrospective Pricing"). MNOs would be granted short-term rights of

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<sup>58</sup> More generally, ComReg notes that there are a variety of approaches to setting spectrum fees administratively by estimating market value such as Administrative Incentive Pricing or "AIP" or Universal system performance pricing ("USPP"). However, these approaches are not of use because both require multiple criteria such as bandwidth, measures of congestion, etc that seek to account for the specific characteristic of the licence being awarded. Given the administrative assignment of rights of use are being made on a consumer disruption basis these criteria do not apply.

<sup>59</sup> Ofcom have previously used business modelling to inform administratively set prices.

use on condition that fees for those rights of use would be determined following MBSA2; and

- III. Benchmarking which is a means of estimating the value of lots using observed prices in concluded auctions or transactions of similar spectrum in comparable environments and adjusting these to take account of differences between awards and transactions.

- 5.46 In relation to I, this approach is highly dependent on the underlying assumptions of the model and subject to notable limitations in obtaining necessary input data. Forming an accurate measure would require an in-depth knowledge of potential users' business models and valuations, including the extent of any synergies between the 700 MHz and 2.1 GHz bands and other frequencies (for example, for a given user the 2.1 GHz spectrum, as a mobile capacity band, may be more valuable if combined with an existing 800/900 MHz licence or a newly acquired 700 MHz licence than on a standalone basis). It is therefore very difficult to obtain robust results under this approach. In any event, it would take a significant amount of time to gather such data and develop the model given the exceptional circumstances surrounding this assignment.
- 5.47 In relation to II, ComReg notes that Retrospective Pricing is similar to the approach used for determining the liberalisation fee, if any, that would be charged to Eir if it were to use the liberalisation option provided in the Decision. Eir, in response to Document 22/63, has also suggested this as a potential approach noting that all temporary or short-term rights should be provisioned on the administrative fee basis of the COVID-19 Temporary ECS Licensing Framework. Once the long-term award process is concluded all fees should be effective from 15 October 2022 and backdated as appropriate.
- 5.48 DotEcon does not recommend Retrospective Pricing for two main reasons.
- 5.49 **First**, it could lead to distorted bidding in the auction because all MNOs would have strong incentives to bid with the aim of keeping prices for the relevant bands low. This could reduce competition within MBSA2 and potentially result in an inefficient outcome.
- 5.50 DotEcon acknowledges that similar arguments could be made in respect of the process for estimating Eir's liberalisation fee. However, in this case, all MNOs (including Eir) would have aligned incentives to try and minimise prices for certain bands. Further, the benefits are potentially greater for Eir as it would only be required to pay a small proportion of the estimated price and only in the unlikely scenario that prices reached a very high level, whereas the fees for the short-term licences proposed here would be directly proportionate to the auction prices.

- 5.51 **Second**, DotEcon notes that this approach would require operators to commit in advance to paying a fee at a level and for a period that is unknown. This uncertainty could lead to some short-term licences not being taken up as operators may be reluctant to make this commitment which could potentially see these operators paying a short-term licence fee in excess of their valuation.
- 5.52 DotEcon acknowledges that Eir faces a similar risk in relation to a potential fee for liberalising its 2.1 GHz spectrum. However, it notes that the risk in terms of short-term licences is likely to be greater given its view that Eir would be unlikely to need to pay a liberalisation fee whereas short-term licence fees would be certain.
- 5.53 ComReg notes that the approach suggested by Eir has some benefits as it would be based directly on prices achieved in MBSA2 and there is a potentially appropriate methodology for estimating such prices in Annex 14 of the Information Memorandum (Document 21/40). However, as noted at the outset of this Chapter, ComReg is equally conscious of its objectives to avoid consumer disruption and potential distortions to the MBSA2 process that might arise from any approach it takes to estimating fees for short-term licences.
- 5.54 The potential distortions to the award in relation to the 2.1 GHz liberalisation fee concerned bidders other than Eir attempting to drive the price of Time Slice 1 in order to increase the liberalisation fee applied to Eir. The risk of this behaviour was considered low because it is inherently risky as such bidders could win unwanted lots. Further, given the likely market value of the spectrum, any price driving bid would need to be large<sup>60</sup>, which conversely has a significant disciplinary effect of increasing the chance that such bids would result in winning unwanted lots.
- 5.55 Alternatively, in the current case, the potential distortion is all three MNOs attempting to keep the price low and close to the reserve price. However, there is no risk to bidders in trying to keep the price low and simply relies on bidders having aligned bidding incentives (i.e., at a minimum, all MNOs would have aligned incentives). To the extent other bidders wished to compete, competition would proceed as normal, and the MNOs are no worse off.
- 5.56 ComReg also agrees with DotEcon that the risk of not knowing the price of the short-term licence in advance is significantly higher in this case. ComReg notes that there is a low risk of a liberalisation fee applying to Eir because of the likely value of the spectrum. However, in relation to short-term fees, such

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<sup>60</sup> ComReg notes that the reserve price for 2.1 GHz spectrum would need to increase circa five times before such a bid would exceed Eir's existing fees.

a fee will apply, and the only question concerns the overall level and a bidder's willingness to pay.

- 5.57 This raises the prospect that MNOs may not apply for short-term 2.1 GHz rights of use due to the uncertainty of not knowing what the fee will be. While it might be argued that this risk is small, ComReg's primary policy issue in this matter is to avoid any potential for consumer disruption which remains consistent with ComReg's general objectives.
- 5.58 It should be noted that ComReg takes a similar approach in allowing Eir to apply for a short-term 2.1 GHz licence to liberalise its existing 2.1 GHz band spectrum rights. This removes the uncertainty that Eir may have in relation to its liberalisation fee such that it would now be able to apply for a short-term 2.1 GHz licence (without any liberalisation fee) that would cover the period between the expiry of its COVID-19 Temporary ECS Licence and the commencement of MBSA2 rights of use.
- 5.59 Therefore, ComReg is of the preliminary view that Retrospective Pricing would not be appropriate.
- 5.60 In relation to III, benchmarking can also be limited by the lack of comparator data for certain spectrum bands and such concerns would be heightened in a situation where ComReg is estimating market value and a higher degree of certainty is required compared to setting minimum prices with the final prices being set by competition. However, such concerns are less of an issue here given that there are many 700 MHz and 2.1 GHz reference points and both of these bands (in particular the 2.1 GHz band) have been in use for a long period. Therefore, there is a higher degree of reliability associated with estimating the market value of the 700 MHz and 2.1 GHz Bands using the benchmarking approach.
- 5.61 Benchmarking has the advantage of revealing information about the actual willingness to pay for spectrum in other countries for similar bands. Other approaches are based on assumptions and forecasts about future behaviour which can be incorrect or change with proximity or onset of an award process. Furthermore, a benchmarking exercise can be completed expediently and in advance of the expiry of existing licences which is particularly relevant in this award. Finally, ComReg has used benchmarking successfully to set minimum prices since 2007 and operators will be very familiar with the approach.
- 5.62 Therefore, ComReg is of the preliminary view that market-based fees for the 700 MHz and 2.1 GHz bands are best determined by using benchmarking.

### 5.4.1 Benchmarking market value for the 700 MHz and 2.1 GHz Bands

5.63 ComReg notes that it has used a benchmarking approach to set minimum prices for the MBSA2. The benchmarking approach used to set Minimum Prices is described in Section 7.9 of Document 19/59R. The methodology set out in DotEcon's benchmarking is the same except for the following updates:

- i. To form a reasonable view on the minimum price for a given band, sub-samples of the relevant awards for calculating the benchmarks were considered. Of particular relevance were competitive auctions in the last 10 years<sup>61</sup>. The last MBSA2 benchmarking report was conducted in 2021 and published in ComReg Document 21/39<sup>62</sup>. This current benchmarking exercise takes awards from the last 10 years meaning that awards between 2010 and 2013 have been removed.
- ii. A new approach for identifying licences sold has been implemented by DotEcon<sup>63</sup> for categorising competitive prices relative to when the MBSA2 reserve benchmarking was done. The current approach<sup>64</sup> has been updated by only retaining price data for licences that sold above reserve. Therefore, some of the awards included in the MBSA2 reserve benchmarking are removed.
- iii. the real discount rate has been updated to reflect the most recent estimate of the WACC for the mobile sector<sup>65</sup> (the current analysis uses a discount factor of 3.36%, whilst the MBSA2 reserve benchmarking used a discount factor of 4.35%).
- iv. Euro prices have been converted to 2022 terms compared to the most recent MBSA2 benchmarking prices which were in 2021 terms.

5.64 DotEcon advises the following in relation to the updated benchmarking

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<sup>61</sup> As recent market conditions and technical developments are more likely to have been considered by operators valuing spectrum in these auctions).

<sup>62</sup> ComReg Document [21/39](#), "Multi Band Spectrum Award - DotEcon Report – Benchmarking Update", published 16 April 2021

<sup>63</sup> The observations have been taken from DotEcon's in-house spectrum awards database, which is based on data available in the public domain. This is subject to regular updating and extension of the data available.

<sup>64</sup> For the MBSA2 benchmarking, DotEcon considered prices to be competitive if they were from an auction where any lots sold above reserve. However, this previous approach failed to identify cases in which some specific bands in multiband awards sold without competition, for example due to tight caps. In such cases, price observations reflected reserve prices, rather than competitive prices.

<sup>65</sup> [ComReg Document 22/47](#), 'Weighted Average Cost of Capital ("WACC") Annual update – 2022' published 28 June 2022. Available at [www.comreg.ie](http://www.comreg.ie)

report:

- In the 700 MHz Band, DotEcon expects the market value of a 20-year licence<sup>66</sup> to be within the range of **€0.45-0.55 per MHz per capita**, noting that the price corresponding to the most recent European auction (the Belgian 5G auction) is just above this range, at €0.573 per MHz per capita. DotEcon recommends a benchmark of €0.518 which is the mean observation from European competitive auctions in the last five years; and
- In the 2.1 GHz Band, DotEcon expects the market value of a 20-year licence to be centred around **€0.25-0.35 Euro per MHz per capita**. The price corresponding to the most recent European auction (the Belgian 5G auction) is also above this range, at €0.421 Euro per MHz per capita. DotEcon recommends a benchmark of €0.273 which is the mean observation from European competitive auctions in the last five years.

5.65 Setting actual fees using a benchmark is similar to the approach used to set minimum prices for competitive awards. However, it should be noted that ComReg has repeatedly set out that benchmarking is used to set minimum prices conservatively and below the market value of the spectrum in order to avoid choking off demand during the auction. But, as noted by DotEcon, with short-term licences where spectrum is assigned administratively the aim is to seek a best estimate of market value, rather than a deliberate underestimate (as when setting reserve prices in an auction). Therefore, in relation to the short-term assignment considered in this paper, there is potential for setting the price higher than the minimum price in the MBSA2 to more closely approximate market value<sup>67</sup>.

5.66 Notwithstanding, administratively estimating the market value of spectrum bands to a high degree of accuracy is not straightforward and open to error. An excessive fee is likely to discourage the use of the scarce resources at issue and result in under-utilisation. Similarly, fees set too low risks undermining the efficiency of the use of those resources and risks distorting competition and the award of long-term rights as discussed in Section 5.3.1 above. As noted by DotEcon, fees set too low also risks discriminatory

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<sup>66</sup> While the duration of MBSA2 fees is somewhat shorter – everything (MBSA and proposed benchmarks) are in terms of 20-year licences (until converting into 3-month short-term fees) so they are directly comparable.

<sup>67</sup> In that regard, DotEcon uses the arithmetic mean instead of the geometric mean to inform the benchmarks. The geometric mean was used to assess minimum prices because it is more conservative. However, in this instance because the aim is to more closely estimate market prices the arithmetic mean is the more appropriate metric, as this gives equal weight to all observations, rather than reduced weight to higher observations.

treatment in favour of short-term licensees and various competitive distortions as previously discussed. Setting fees too high could lead to MNOs not exercising their option to use short-term rights which could create consumer disruption.

5.67 Nevertheless, ComReg notes that the minimum prices in the MBSA2 provides an excellent reference point because these fees are already considered to be below the market value (and ComReg previously consulted on same), and prices below the minimum price would likely be too low. For information, ComReg notes that:

- The benchmark used to inform 700 MHz minimum prices in MBSA2 was set at €0.469 per MHz per capita or €0.518<sup>68</sup> (when updated for WACC and inflation); and
- The benchmark used to inform 2.1 GHz minimum prices in MBSA2 was set at €0.247 per MHz per capita or €0.273 (when updated for WACC and inflation).

5.68 With that in mind, ComReg proposes the following benchmarks for the 2.1 GHz and 700 MHz Bands:

- For the 700 MHz Band, **a benchmark of €0.518 per MHz per capita** would be appropriate because it would use the most recent European-only auctions in the last 5 years. These auctions are likely to be most relevant in estimating an appropriate market value. This is the same as the benchmark used to set minimum prices (updated for inflation and new WACC) and it is also the middle of the market value range (€0.45 - €0.55) estimated by DotEcon; and
- For the 2.1 GHz Band, **a benchmark of €0.273 per MHz per capita** would be appropriate because, similar to the 700 MHz Band, it would use the most recent European-only auctions in the last 5 years. This is the same as the benchmark used to set minimum prices (updated for inflation and new WACC) and it also in the lower end of the market value range (€0.25 - €0.35) estimated by DotEcon.

5.69 ComReg notes that there is scope for such estimates to be higher. However, there is a need to be sufficiently conservative in order to avoid rights of use not being assigned. In that regard, it is satisfied that the benchmarks proposed are reasonable and pragmatic given the exceptional circumstances of this assignment. In particular, both estimates are the same as those used for minimum prices except for updates to account for changed factual

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<sup>68</sup> Current minimum prices are based on the €0.455 benchmark as they were set in 2021.

circumstances (inflation, WACC and population) since those prices were set. This provides significant protection against these estimates being set too high and above the market value of the spectrum.

### **Market value**

5.70 ComReg notes that both Three and Vodafone appear to suggest that fees could be set based on a portion of market value (i.e., a Spectrum Usage Fee)

5.71 For example, Vodafone opines that *“the simplest way to allocate for this short-period of a few months, taking into account case is to continue allocations on existing conditions and spectrum usage fees for the short period required.”* This would result in a nominal fee for the 700 MHz Band (discussed above) and the use of existing SUFs from the 2.1 GHz Licences.

5.72 Similarly, Three contends that *“it would not be appropriate to include a component of the Spectrum Access Fee in the short-term licences. This component of the fee from the long-term licences reflects the value to licensees to obtain a 20-year licence. That does not apply in this case as licensees merely get short-term use of the spectrum”*.

5.73 ComReg observes, however, that Three’s position in this consultation appears to conflict with its position in Three Ireland (Hutchinson Limited) v-ComReg where Mr. Tom Hickey, in his affidavit states:

*“However, I say and am advised that (to the extent that it arises) such a concern would be very easily resolved by increasing the price of such licences to reflect the level of the reserve price which ComReg proposes to apply to such spectrum in the Intended Auction (or other appropriate measures).”*<sup>69</sup> [emphasis added]

5.74 Similarly, Counsel for Three, referred to same in oral submissions:

*“Again, there’s nothing to stop ComReg increasing the fee for these temporary licences that we need. For example, to the reserve price for the spectrum in the main auction, using the reserve price as a guide charged, say, on a monthly basis as the fee for these temporary licences.”*<sup>70</sup> [emphasis added]

5.75 For the avoidance of any doubt, the reserve price in MBSA2 is the SAF component of the minimum price, and this has been the case in the last five spectrum auctions (of which Three were winning bidders in four). Therefore, Three would be entirely aware that the reserve price represents only the SAF

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<sup>69</sup> Affidavit, TH2, paragraph 149.

<sup>70</sup> Day 1, p95, Line 15-28.

component of the minimum price, and its submissions on affidavit and in open court contradict its response to Document 22/63 where it suggests that it would not be appropriate to include a component of the SAF in the proposed fee.

- 5.76 Notwithstanding, both Three and Vodafone appear to be mistaken in their assessment of how the SAF and Spectrum Usage Fees (SUFs) relate to market value of the spectrum. Both the SAF and the SUFs combined reflect the market value for spectrum. It is simply incorrect to suggest or assume that operators only consider SAFs or only consider SUFs when valuing a 20-year licence and, by extension, that one of these components should not be included in assessing the appropriate fees for short term rights of use.
- 5.77 Rather, the value of the spectrum assigned by auction is reflected in a two-part payment structure to facilitate ComReg in achieving its statutory objectives over a long period. ComReg splits fees into (i) an upfront SAF to support an efficient assignment of rights of use in the Auction and (ii) an on-going stream of SUFs to ensure optimal use of the spectrum over the duration of the licence.<sup>71</sup> Clearly, such factors are not relevant here given the short duration of the licence and the proposed administrative assignment of rights of use.
- 5.78 By extension, the suggestion that ComReg should only use part of the market value, that is the SUFs, to inform fees for short-term licences is misguided.

#### 5.4.2 Potential adjustment for short term nature of licences

- 5.79 ComReg notes that Mr. Justice McDonald stated in his oral judgment of 20 July 2022, that, in his view, the stay is likely to remain in place for no more than 'a few months', i.e., when he expected the substantive judgment on the Appeal might be delivered.
- 5.80 However, the estimate of market value set out in the section above is based on a 20-year duration. So, even though ComReg cannot say when the substantive judgment on the Appeal might be delivered, it is appropriate to consider whether such estimates should be adjusted to account for the fact that we are dealing with short-term licences here.
- 5.81 DotEcon advises that while it is possible that this could have adverse effects on investment incentives, the magnitude of the profitability impact on MNOs

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<sup>71</sup> The Spectrum Access Fee is necessary to discourage frivolous bidders from participating in the auction. However, requiring the entire value of the spectrum to be provided upfront would provide no incentives to use the spectrum efficiently over the duration of the licence. Therefore, ComReg uses a SUF component to provide incentives for licensees to hand back part or all of their spectrum holdings in the event that they no longer have use for the spectrum (and are therefore not binding).

– and so the consequence for market value of the spectrum – is much less certain and may be limited by several mitigating factors.

- Every MNO is in a similar position, so each may be limited in their ability to invest by the short-term nature of spectrum access, this also means that rivals are less likely to pursue investments to gain a competitive advantage;
- Although part of the additional revenues associated with new 5G services may be delayed, the large and costly investments associated with bringing 5G to the 700 MHz band and bringing various capacity bands into use are also delayed;
- Coverage obligations on the 700 MHz band set out in the MBSA2 Decision (which would negatively impact on the value of long-term rights of use) do not apply; and
- If long-term access to additional spectrum, especially the 700 MHz band, leads to vigorous competition for 5G traffic, through new investment in network infrastructure and innovative services, it is conceivable that MNOs could benefit if this competition is deferred for all of them by delaying the award of long-term rights<sup>72</sup>.

5.82 For these reasons, DotEcon notes that it is not essential to discount the estimated value of a long-term usage right to determine a fee for short-term spectrum use and that it would be reasonable simply to apply the 20-year benchmark price, amortising this in a constant stream of payments. Furthermore, if an operator won a long-term spectrum right and made new investments associated with that spectrum, the benefits of that investment would not materialise immediately. The initial benefits of a long-term licence would in any case be associated with additional spectrum being used within a 'business as usual' scenario where existing services are maintained and improved, much as with a short-term usage right.

5.83 However, the rights of use at issue here are for a short period, and the factors informing a longer-term valuation might not be applicable in full for a short-term licence. ComReg agrees with DotEcon that while the short-term nature of the licence could impact investment incentives, its impacts are likely to be relatively modest for the reasons given above. Furthermore, as noted in

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<sup>72</sup> DotEcon cites the example of Vodafone, in supporting Three's application for a stay despite having previously supported ComReg in the substantive appeal (and also re-asserting that support in its intervention regarding the stay), is suggestive that Vodafone's preference is for the MBSA2 to run with the rules as set out in the Decision in the event that auction is held, but for that auction to be delayed if possible.

Paragraph 5.19, each of the MNOs claims (to varying degrees) to have already invested in the roll out of the 700 MHz Band and liberalised 2.1 GHz Band across the State and that both bands are being used to deliver services to consumers across the State.

- 5.84 Notwithstanding, and considering the exceptional circumstances surrounding this assignment, ComReg agrees with DotEcon that some caution is appropriate given the uncertainties involved and it is therefore appropriate to take a conservative approach and account of the short-term nature of this assignment relative to long term rights of use.

***Approach for adjusting the market value to account for short-term use***

- 5.85 DotEcon advises that full modelling of this issue would require consideration of the risk associated with MNOs losing access to short-term usage rights once an auction is run and the implications of MNOs who have difficulties in accommodating changes to their spectrum holdings. Such analysis is clearly infeasible without detailed knowledge of MNOs' investment planning and their assumptions about possible future auction outcomes.
- 5.86 ComReg agrees that modelling such issues is infeasible in the circumstances, and such an approach would require more detailed information than the business modelling referred to at the outset of this section. (i.e., it would require not just the value of the spectrum over a long-term period but also the associated stream of benefits informing that value).
- 5.87 DotEcon suggests that an alternative approach is to proxy such impacts by assuming that the value of long-term licences is accrued to a greater extent in the tail end of the licence when the benefits from the investments made earlier are accrued<sup>73</sup>. The overall value of a licence represents the present discounted value of the incremental profits associated with that licence. As these profits grow over time a smaller part of the overall value of a licence should be ascribed to its earlier years than its later ones.
- 5.88 The valuation of the early part of the licence ultimately depends on how the stream of benefits (cashflow/profits) are allocated over the duration of the licence and this would likely vary across licensees. In Table 4 below, DotEcon presents estimates of this based on assumed growth in profitability over the duration of the licence where a higher assumed growth of profitability implies that the value of the earlier part of the licence is lower. For example, if the benefits are linear over time and profits earned from use of the licence do not grow over the duration of the licence, there is no reason for fees to

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<sup>73</sup> Page 26 of DotEcon Report. (ComReg Document 22/72a).

take any account of the proposed short-term duration of the licence.

**Table 4 Potential adjustment for short term nature of licences**

<b>Assumed growth of profitability (per annum)</b>	<b>0%</b>	<b>0.5%</b>	<b>1%</b>	<b>2%</b>	<b>4%</b>
<b>Final year profit to first year profit ratio</b>	100%	110%	122%	149%	219%
<b>First year to licence value ratio</b>	6.7%	6.5%	6.2%	5.7%	4.7%
<b>Implied discount relative to flat profitability</b>	0.0%	-4.0%	-8.0%	-15.7%	-30.1%

5.89 DotEcon notes<sup>74</sup> that the calculations above show that it is possible that a short-term licence might be worth less than the value of a long-term licence, particularly if one simply amortised the 20-year value into an increasing stream of benefits rather than a constant one (as per an assumed profitability growth of 0%).

5.90 DotEcon advises<sup>75</sup> that annual profitability growth of 1 – 2% is plausible and higher estimates are not realistic because they assume that the incremental profitability due to a long-term licence is significantly larger in its final years than its initial ones. In particular, DotEcon notes that this is unlikely to be the case for the following reasons:

- the incremental profitability associated with a licence will always be constrained by competition with rival operators;
- the incremental profitability associated with a licence cannot be expected to grow in line with data traffic; and
- if it were the case that the incremental profitability benefits of spectrum were expected to grow strongly over time then there would be strong upward time trend in spectrum prices. This is not shown in the benchmark data.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid.

- 5.91 ComReg notes that it is not straightforward to determine the value of spectrum rights of use assigned for a short period compared to their longer-term value. An accurate assessment would require detailed commercial information not available to ComReg. The approach recommended by DotEcon has the advantage that it provides a reasonable proxy for the value of a short-term licence and is straightforward to implement while not requiring detailed information.
- 5.92 The value of a spectrum licence to an operator is calculated based on the net present value of the cash flows that an operator can create over the licence period<sup>76</sup>. However, ComReg agrees that cash flows are unlikely to be linear across time and the overall value of the spectrum grows over time as the operator earns a return on their investments. This means that the early part of a licence is likely to have a lower valuation compared to the later part. ComReg agrees that this should be reflected in the spectrum fees charged over a short duration.
- 5.93 Therefore, DotEcon's assumption that the value of long-term licences is accrued to a greater extent in the tail end of the licence is a reasonable one. Further, the assumed growth in profitability of 1-2% is reasonable because growth rates any higher would assume a more than doubling of profit from the start of the licence to the end. ComReg considers such a profit profile to be highly unrealistic in a market subject to effective downstream competition.
- 5.94 Based on the above, ComReg is of the preliminary view **that a discount of 10%** (between the 8-16% range) off the long-term market value is appropriate proxy for the market value of a short-term licence. ComReg notes that the use of 10% at the lower end of the range is appropriate because there is some merit to the view that such a discount may not be necessary at all.

### 5.4.3 Proposed Short-term Fees

- 5.95 Taking the proposed benchmarks from Paragraph 5.68, ComReg **applies the 10% discount** to account for the short-term nature of the licences. Therefore, the following benchmarks will be used to estimate the market value of short-term licences:
- For the 700 MHz Band, **a benchmark of €0.466 per MHz per capita** applies; and
  - For the 2.1 GHz Band, **a benchmark of €0.246 per MHz per capita**

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<sup>76</sup> In theory, this equals the value attributed to the licence by the operator and thus the maximum price he is willing to pay in an auction.

applies.

5.96 Using the latest population estimate of 5,123,536 from the recent Census 2022, the estimated value of the 700 MHz Band and 2.1 GHz Band over a 20-year duration (while adjusting for short term nature of licences at issue) is €23.9 million<sup>77</sup> and €12.6 million respectively.

5.97 Finally, these 20-year prices are annualised using a real discount rate of 3.36% to given annual fees as set out below. These are then pro-rated to given spectrum fees for a 3-month period.

**Table 5 Potential fees for short term licences**

	<b>700 MHz</b>	<b>2.1 GHz</b>
<b>Price per 2 × 5 MHz block per 3-month period<sup>78</sup></b>	€401,000	€212,000

#### 5.4.4 Eir Liberalisation and fee

5.98 Eir’s existing 3G Licence for 2 × 15 MHz of spectrum rights will not expire until 11 March 2027, however, its COVID-19 Temporary ECS Licence, which liberalises these spectrum rights will expire on 1 October 2022. Therefore, there is the issue of how to contend with the fact that Eir will only have non liberalised 2.1 GHz rights of use following the expiry of its COVID-19 Temporary ECS Licence.

5.99 DotEcon advises that ComReg has two broad options in terms of allowing Eir access to liberalised 2.1 GHz spectrum over the interim period:

1. Allow Eir to apply for short-term licence that allows it to use its current 2.1 GHz holdings on a liberalised basis without needing to liberalise using the option provided in the Decision.
2. Do not allow Eir access to a short-term licence in the 2.1 GHz band, requiring it to use the option provided in the MBSA2 Decision if it wishes to use the spectrum on a liberalised basis (noting that this would require Eir to commit to potentially paying a liberalisation fee when the MBSA2 has been completed).

<sup>77</sup> €0.466 x 5,123,536 x 10 MHz.

<sup>78</sup> Fees have been rounded to nearest thousand.

- 5.100 DotEcon recommends Option 1 because there is no clear reason for requiring Eir to commit to potentially paying a liberalisation fee for the period between the start of new 2.1 GHz licences and the expiry of Eir's current licence in 2027, depending on the outcome of the MBSA2.
- 5.101 ComReg agrees with this approach. While Eir could apply for liberalisation prior to the expiration of its COVID-19 temporary spectrum licence<sup>79</sup> this could potentially be subject to a fee (for the period of Time Slice 1) depending on the outcome of MBSA2. Allowing Eir to apply for a short-term licence that allows it to use liberalised 2.1 GHz rights removes this minor uncertainty.
- 5.102 Further, ComReg notes that under Option 2 Eir may still decide that the uncertainty is such that will not utilise this option which would have the effect of harming consumers who would no longer benefit from liberalisation (e.g., LTE 2100). ComReg also considers this risk small, however given the primary policy issues is to avoid consumer disruption, Option 1 is best aligned with this objective.
- 5.103 No fee would apply to Eir in respect of the 2.1 GHz Band because this is the fee that would apply if the value of the spectrum in MBSA2 was at or below existing fees. Given that these short-term fees are based on a market value which is below existing 2.1 GHz fees, it follows that no fee is required in respect of the liberalisation of Eir's existing 2.1 GHz rights of use.
- 5.104 For the avoidance of any doubt, Annex 14 of the IM continues to apply in respect of whether a liberalisation fee would apply to long-term rights of use in MBSA.

## 5.5 Licence and technical conditions

### 5.5.1 Summary of interested parties' submissions

- 5.105 Eir and Three separately contend that licence conditions should be on the basis of the Temporary ECS Licences. Eir further contends that there should not be any limit to the existing sites/apparatus deployed for any short-term rights of use.
- 5.106 Vodafone is of the view that the purpose of any short-term rights of use is to mitigate consumer disruption and submits that changing traffic patterns may drive a small number of equipment changes and that this should be permitted.
- 5.107 Eir and Vodafone both submit that the Temporary ECS Licencing technical

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<sup>79</sup> See [ComReg Document 22/60](#), "Application Form for an Interim B 2.1 GHz Band Liberalised Use Licence", published 12 July 2022. Available at [www.comreg.ie](http://www.comreg.ie)

arrangements have proven to be appropriate and worked well to manage co-existence with other ECS. Eir and Vodafone support a continuation of this approach.

### 5.5.2 ComReg's preliminary assessment

5.108 Noting the views of respondents, ComReg does not propose to restrict the rollout of sites or apparatus in the interest of mitigating consumer disruption, however ComReg reminds operators that any short-term rights of use are without prejudice to the long-term award of these rights of use.

5.109 ComReg proposes to implement technical licence conditions as set out in the relevant EC Decisions<sup>80</sup>.

5.110 The proposed licence conditions are set out in Annex 3 "Draft Regulations" of this document.

5.111 ComReg proposes that rights of use issued as part of Short-term licences will be granted on a:

- non-exclusive basis where the relevant provisions<sup>81</sup> are set out in draft form in the Draft Regulations contained in Annex 3; and
- service and technology neutral basis, such that the deployment and provision of all technologies and services that comply with the relevant EC harmonisation decisions for those bands will be permitted.

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<sup>80</sup> For the 2.1 GHz Band EC Decision 2012/688/EU amended by EC Decision 2020/667/EU and for 700 MHz Duplex EC decision 2016/687/EU.

<sup>81</sup> "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.

## Chapter 6

# 6 Draft Decision

This chapter sets out a draft decision document based on the preliminary 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/EC<sup>82</sup>;

**“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 2x5 MHz block of spectrum in the 700 MHz Duplex;

**“700 MHz EC Decision”** means Decision (EU) 2016/687<sup>83</sup>;

**“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;

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<sup>82</sup> 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.

<sup>83</sup> 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.

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

**“Short Term ECS Licence”** means a licence of the type set out in draft form in Schedule 1 to the Temporary ECS Licence Regulations;

**“Short Term ECS Licence Regulations”** means the Wireless Telegraphy (SHORT-TERM ELECTRONIC COMMUNICATIONS SERVICES LICENCES) Regulations, 202X, as set out in draft form in Annex 3 to ComReg Document 20/72 [this document];

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

**“Minister”** means the Minister of Communications, Climate Action and Environment;

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

**“Relevant Spectrum”** means 2.1 GHz Band Blocks and 700 MHz Duplex 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 and 20/122 (insofar as they are relevant to the present decisions and, in particular, concerning the technical licence conditions for the Relevant Spectrum);
  - b) 20/72 [document to which this draft decision is attached];  
and
  - c) 20/XX [document to which the final decision will be attached];
- 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).

- 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)I and 19 thereof;
  - d) the 2.1 GHz Band EC Decision;
  - e) the 700 MHz EC Decision;
  - f) Sections 5 and 6 of the Wireless Telegraphy Act, 1926; and
  - g) the applicable Policy Directions made by the Minister under section 13 of the Communications Regulation Act 2002,

and, noting that it has:

- h) 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. as set out in the various chapters of Document 20/XX [document to which the final decision will be attached] and their supporting annex.

### 3. DECISIONS

4. 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 Short-Term ECS Licence Regulations, to make those regulations under section 6 of the Wireless Telegraphy Act 1926, prescribing relevant matters in relation to Short-Term ECS Licences, including prescribing the form of the licences concerned, their duration and the conditions and restrictions subject to which they are granted;

#### **700 MHz and 2.1 GHz Bands**

- ii. upon application properly being made to it by MNOs for Short Term ECS Licences with rights of use in the 700 MHz and 2.1 GHz Bands:
    - a) to select which MNOs will be granted Short-Term ECS Licences in the 700 MHz and 2.1 GHz bands having regard to the principles generally

described in Chapter [XX] of Document 20/XX [document to which the final decision will be attached] and further particularised in the Short-Term ECS Licence Regulations, as made, and the material provided by applicants in support of their respective application;

- b) to grant Short-Term ECS Licences, 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 Short-Term ECS Licence Regulations, including the schedule to Short-Term ECS Licences as currently set out in Annex 3 of Document 20/72 [this document];
  - c) to make the duration of a Short-Term ECS Licence up to but no longer than 3 calendar months.
- iii. upon application being properly being having regard to the principles generally described in Chapter [XX] of Document 20/XX [document to which the final decision will be attached] and further particularised in the Short-Term ECS Licence Regulations, and the material provided by applicants in support of their renewal, to renew a Short-Term ECS Licence for a further period of up to but no longer than 3 calendar months;
- a) that any Short-Term ECS Licence granted or renewed shall expire no later than 6 calendar months from the date of the Short-Term ECS Licence Regulations.

#### **4. STATUTORY POWERS NOT AFFECTED**

5. 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 7

# 7 Submitting comments and next steps

## 7.1 Submitting Comments

- 7.1 Considering the urgency of the issue, ComReg has set a shorter period compared to the normal four weeks identified in ComReg's Consultation Procedures<sup>84</sup>, and invites input from interested parties by 17:00 hours (Irish time) on **Wednesday 31 August 2022**.
- 7.2 It would make the task of analysing responses easier if comments were referenced to the relevant section / paragraph number in each chapter and annex in this document.
- 7.3 Please also set out your reasoning and all supporting information for any views expressed.
- 7.4 Responses must be submitted in written form (e-mail) to the following recipient, clearly marked — Submissions to ComReg 22/72:

Mr. Patrick Bolton

Email: [marketframeworkconsult@comreg.ie](mailto:marketframeworkconsult@comreg.ie)

- 7.5 We request that electronic submissions be submitted in an unprotected format so that they can be readily included in the ComReg submissions document for electronic publication.
- 7.6 ComReg appreciates that respondents may wish to provide confidential information if their comments are to be meaningful. In order to promote openness and transparency, ComReg will publish all respondents' submissions to this consultation, as well as all substantive correspondence on matters relating to this document, subject to the provisions of ComReg's guidelines on the treatment of confidential information (Document 05/24).
- 7.7 In this regard, respondents should submit views in accordance with the instructions set out below. When submitting a response to this consultation that contains confidential information, respondents must choose one of the following options:
- A. Preferably, submit both a non-confidential version and a confidential version of the response. The confidential version must have all confidential

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<sup>84</sup> See [ComReg Document 11/34](#), "ComReg Consultation Procedures", published 6 May 2011. Available at [www.comreg.ie](http://www.comreg.ie)

information clearly marked and highlighted in accordance with the instruction set out below and include the reasons as to why they consider any particular material to be confidential. The separate non-confidential version must have actually redacted all items that were marked and highlighted in the confidential version.

OR

B. Submit only a confidential version and the reasons as to why they consider any particular material to be confidential, and ComReg will perform the required redaction to create a non-confidential version for publication. With this option, respondents must ensure that confidential information has been marked and highlighted in accordance with the instructions set out below. Where confidential information has not been marked as per our instructions below, then ComReg will not create the non-confidential redacted version and the respondent will have to provide the redacted non-confidential version in accordance with option A above.

- 7.8 For ComReg to perform the redactions under Option B above, respondents must mark and highlight all confidential information in their submission as follows:
- a. Confidential information contained within a paragraph must be highlighted with a chosen particular colour,
  - b. Square brackets must be included around the confidential text (one at the start and one at the end of the relevant highlighted confidential information),
  - c. A Scissors symbol (Symbol code: Wingdings 2:38) must be included after the first square bracket.
- b) For example, “Redtelecom has a market share of [✂ 25% ✂].”

## 7.1 Next Steps

- 7.9 Following receipt and consideration of submissions in response to this consultation, and other relevant material, ComReg intends to publish a response to consultation together with its final decision.
- 7.10 While ComReg cannot provide further clarity on the overall timelines at this juncture, as this will depend, among other things, on the nature of responses received to this consultation, ComReg endeavours to issue the response to consultation and decision in sufficient time to allow for the making of the regulations and issuing of licences by 1 October 2022, should it be appropriate to do so.

# 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 Band	The frequency range 694 MHz – 790 MHz of which services have deployed in 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
2.3 GHz Band	The frequency range 2300 – 2400 MHz
2.6 GHz Band	The frequency range 2500 – 2690 MHz
2002 Act	The Communications Regulation Act 2002 (as amended)
Authorisation Regulations	European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011)
Application Form	ComReg Document 22/[YY] a [document that may be attached to the final decision ].

Appeal	The appeal of certain aspects of ComReg’s Decision on the MBSA2 (ComReg Decision D11/20
Assignment RIA	Chapter 4 of this document
Award Process	Refers to the award of the 700 MHz, 2.1 GHz, 2.3 GHz and 2.6 GHz bands. See Document 21/40.
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.
Decision	ComReg Decision D11/20 as contained in Document 20/122
Framework Regulations	Directive No. 2002/21/EC (as amended by Regulation (EC) No. 717/2007, Regulation (EC) No. 544/2009 and Directive 2009/140/EC)
Incumbent Licensee	Means parties that currently hold spectrum rights of use for mobile services in the 700 MHz and 2.1 GHz Bands (i.e. Eir, Three and Vodafone)
Licensees	Has the same meaning as Incumbent Licensee
Information Memorandum (“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.
Main Stage	As set out in ComReg Document 21/40, the Information Memorandum for the MBSA2, the function of the Main Stage is to determine how many Lots each Bidder will be awarded in each of the available Lot Categories, and the price to be paid by each Winning Bidder.
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 <a href="http://www.comreg.ie">www.comreg.ie</a>
MBSA2 Decision	Decision D11/20 as published in Document 20/122.
MBSA2 Regulations	Means the Wireless Telegraphy (Liberalised use and related Licences in the 700 MHz duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz bands) Regulations 2021 (S.I. No 264 of 2021).
Proposed Framework	ComReg proposals to put in place a short term (up to 6 months) licensing framework for the issue of spectrum rights of use in the 700 MHz and 2.1 GHz bands from 2 October 2022
SAF	Spectrum Access Fee.
Stay Application	On 2 June 2022, Three applied to the Commercial Court for a stay on the commencement of the Main Stage of the MBSA2 Auction (the “Stay Application”) pending determination of the Appeal.
SUF	Spectrum Usage Fee.
Time Slice 1	Refers to the period commencing on a date as may be specified by the Commission and ending on 11 March 2027 for licences in the 2.1 GHz, 2.3 GHz and 2.6 GHz bands as a result of the MBSA2.
Temporary ECS Licensing Framework	Means the spectrum management measures ComReg put in place in response to the Temporary Situation. See <a href="https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/covid-19-temporary-spectrum-management-measures/">https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/covid-19-temporary-spectrum-management-measures/</a>
Temporary ECS Licences	Same meaning as Temporary ECS Licensing Framework
Temporary Situation	Means the temporary impact upon electronic communications networks and services from the extraordinary situation arising from the spread of the disease known as COVID-19.

Wireless Telegraphy Act	The Wireless Telegraphy Acts, 1926 and 1956, the Broadcasting Authority Acts, 1960 to 1971, in so far as they amend those Acts, the Wireless Telegraphy Act 1972, Sections 2, 9, 10,11,12,14,15,16,17 and 19 of the Broadcasting and Wireless Telegraphy Act 1988 and Sections 181 (1) to (7) and (9) and Section 182 of the Broadcasting Act 2009.
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## 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
ITU-RR	International Telecommunication Union Radio Regulations

## A1.4 Glossary of Technical Terms

3G	Third Generation Mobile System (e.g., UMTS)
ECS	Electronic Communications Service as defined under the Framework Regulations
ECN	Electronic Communications Network as defined under the Framework Regulations
GHz	Gigahertz (1 000 000 000 Hertz)
Hertz (Hz)	Unit of Frequency

LTE	Long Term Evolution of 3G
MHz	Megahertz (1 000 000 Hertz)
MNO	Mobile Network Operator
MMS	Multimedia Messaging Service
MSS	Mobile Satellite Services
SMS	Short Message Service
UMTS	Universal Mobile Telecommunications System.
WBB	Wireless Broadband

## 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 Framework and Authorisation Regulations<sup>85</sup>, and the Wireless Telegraphy Acts 1926 to 2009<sup>86</sup> 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 and Regulation 16 of the Framework Regulations. 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.
- 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.

### 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

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<sup>85</sup> 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.

<sup>86</sup> The Wireless Telegraphy Acts 1926 to 1988 and Sections 181 (1) to (7) and (9) and Section 182 of the Broadcasting Act 2009.

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. It is important to note that further to Article 125 (“Repeal”) of the EECC, with effect from 21 December 2020, the EECC has replaced the EU Common Regulatory Framework.

- 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 law<sup>87</sup>. 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 late-2022. 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 Short-Term ECS Licences, 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 competition<sup>88</sup>;
  - contribute to the development of the internal market<sup>89</sup>;
  - promote the interests of users within the Community<sup>90</sup>;

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<sup>87</sup> With the exception of Articles 53(2), (3) and (4), and Article 54 (See Article 124).

<sup>88</sup> Section 12 (1)(a)(i) of the 2002 Act.

<sup>89</sup> Section 12 (1)(a)(ii) of the 2002 Act.

<sup>90</sup> Section 12(1)(a)(iii) of the 2002 Act.

- ensure the efficient management and use of the radio frequency spectrum in Ireland in accordance with a direction under section 13 of the 2002 Act<sup>91</sup>; 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 Regulations<sup>92</sup> in particular those designed to ensure effective competition<sup>93</sup>.

### 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
- 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

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<sup>91</sup> 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.

<sup>92</sup> 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).

<sup>93</sup> Regulation 16(1)(a) of the Framework Regulations.

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**

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;<sup>94</sup>
- have regard to international developments with regard to the radio frequency spectrum<sup>95</sup>; 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.<sup>96</sup>

### **A2.1.6 Policy Directions<sup>97</sup>**

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. 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

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<sup>94</sup> Section 12(3) of the 2002 Act.

<sup>95</sup> Section 12(5) of the 2002 Act.

<sup>96</sup> Section 12(6) of the 2002 Act.

<sup>97</sup> 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.

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, 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.

## A2.2.2 Authorisation Regulations

### 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 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 in conformity with Article 51 of the EEC.

- 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     Draft licensing regulations**

## Draft Short-Term ECS Licensing Regulations

Any final version of these regulations, which would be made by ComReg under section 6 of the Wireless Telegraphy Act 1926, is expressly subject to the consent of the Minister for the Environment, Climate and Communications under section 37 of the Communications Regulation Act 2002, as amended.

ComReg may make such editorial changes to the text of any final regulations as it considers necessary and without further consultation, where such changes would not affect the substance of the regulations.



STATUTORY INSTRUMENTS.

S.I. No. \_\_\_\_\_ of 2022

WIRELESS TELEGRAPHY (SHORT-TERM ELECTRONIC  
COMMUNICATIONS SERVICES LICENCES)

REGULATIONS 2022

WIRELESS TELEGRAPHY (SHORT-TERM ELECTRONIC  
COMMUNICATIONS SERVICES LICENCES)  
REGULATIONS 2022

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 (Short-Term Electronic Communication Services Licences) Regulations 2022.

*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;
  - “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 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;

“Existing Licence” means a licence issued under the Wireless Telegraphy (Third Generation and GSM Mobile Telephony Licence) Regulations, 2002 and 2003, as amended;

“Existing Licensee” means a person holding one, or more, Existing Licences;

“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);

“Short-Term Electronic Communications Services Licence” means a non-exclusive 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;

“Liberalised Apparatus” means apparatus for wireless telegraphy as defined in section 2 of the Act of 1926 for terrestrial systems capable of providing Electronic Communications Services in the 2.1 GHz Band and 700 MHz Duplex which comply with the Decision of 2012 and Decision of 2016 respectively;

“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 Short-Term Electronic Communications Services Licence;

“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;

“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 Short-Term Electronic Communications Services Licences.

*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 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;
  - (b) the need to encourage the efficient use and ensure the effective management of the radio frequency spectrum; and
  - (c) the Commission's obligations and objectives in relation to competition for the provision of Electronic Communications Networks and Electronic Communications Services.
- (3) An Undertaking that 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 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 2023.

*Conditions of Licences*

6. (1) 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.
  - (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 Short-term ECS Licence, or renewal of a Short-term ECS Licence, is as set out below:
  - (a) For the 700 MHz Duplex Band the fee is €401,000 per 2 x 5 MHz blocks per 3 month period; and
  - (b) For the 2.1 GHz band the fee is €212,000 per 2 x 5 MHz blocks per 3 month period.
- (2) If the duration of a Short-Term ECS Licence is reduced at the request of a Licensee, the Licensee may, at the discretion of the Commission, be entitled to a refund of the Licence Fees already paid, on a pro rata daily basis having regard to the reduced duration.
- (3) For an Existing Licensee holding an Existing Licence which expires after 15 October 2022, the Commission may grant a Short-Term ECS Licence to allow the use of Liberalised Apparatus to such an Existing Licensee for which no fee shall apply. The Existing Licensee shall continue to be liable for all other applicable fees relating to its Existing Licence(s).
- (4) 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 (SHORT-TERM ELECTRONIC COMMUNICATIONS SERVICES LICENCES) REGULATIONS 2022**

**Short-Term Licence 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 (Short-Term Electronic Communications Services Licences) Regulations 2022 ( S.I. No. of 2022 ) (“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 (Short-Term Electronic Communications Services Licences) Regulations 2022 apply.

This Licence shall come into 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

<b>Authorised Band</b>	<b>Name of Spectrum Block</b>	<b>Frequency Assigned to Spectrum Block</b>	<b>Commencement Date per Spectrum Block</b>	<b>Expiry Date per Spectrum Block</b>
<i>700 MHz Duplex, 2.1GHz, 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

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

**Part 3**

Apparatus Location and Details

<b>Authorised Band</b>	<b>Site Identity</b>	<b>Eastings</b>	<b>Northings</b>	<b>Equipment Index Reference</b>	<b>Maximum EIRP/ TRP (dBm/ 5 MHz)</b>
<i>700 MHz Duplex, 2.1 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:
  - “Active Antenna Systems” or “AAS” means a Base Station and an antenna system where the amplitude or phase, or both, 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;
  - “Base Station” means Apparatus connected to a backhaul network which provides a Radiocommunication Service to Terminal Stations using spectrum in the 700 MHz Duplex or 2.1 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;
  - “MNO” means a mobile network operator with an existing network in Ireland;

“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 or 2.1 GHz Band ;

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

### *Technical Conditions*

#### 2. (1) 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 -788MHz.
- (c) The Licensee shall comply with all Memoranda of Understanding (‘MoU’)<sup>1</sup> 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.

### *Base Stations*

- (d) 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.
- (e) 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*

- (f) The maximum mean in-block power limit of 23 dBm for Terminal Stations shall apply<sup>2</sup>.

<sup>1</sup> 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](http://www.comreg.ie)

<sup>2</sup> 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. This value is subject to a tolerance of up to + 2 dB, to take account of operation under extreme environmental conditions

- (g) The out-of-block technical conditions set out in Table 10 to Table 12 of the Annex to the Decision of 2016 shall apply.

### 3. (1) 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 MoU<sup>3</sup> 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*

- (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/5 MHz 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.

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and production spread.

<sup>3</sup> 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](http://www.comreg.ie).

*Terminal Stations*

- (f) The maximum mean in-block power limit over frequencies of FDD Uplink of 24 dBm for Terminal Stations shall apply<sup>4</sup>.

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

day of 2022

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 2022

Minister for the Environment, Climate and Communications

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<sup>4</sup> 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

## 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 Short-Term Licences for apparatus for wireless telegraphy for terrestrial systems capable of providing Electronic Communications Services in the 700 MHz Duplex and the 2.1 GHz Bands. These Short-Term ECS Licences address the short-term impact upon Electronic Communications Networks and Electronic Communications Services considering the expiry of the 2.1 GHz band licences and the expiry of temporary spectrum rights of use in the 700 MHz band pending the substantive judgment on the appeal of certain aspects of the Multi Band Spectrum Award Decision licences.

DRAFT

## **Draft Amended MBSA2 Licensing Regulations**

Any final version of these regulations, which would be made by ComReg under section 6 of the Wireless Telegraphy Act 1926, is expressly subject to the consent of the Minister for the Environment, Climate and Communications under section 37 of the Communications Regulation Act 2002, as amended.

ComReg may make such editorial changes to the text of any final regulations as it considers necessary and without further consultation, where such changes would not affect the substance of the regulations.



STATUTORY INSTRUMENTS.

S.I. No. \_\_\_\_\_ of 2022

WIRELESS TELEGRAPHY (LIBERALISED USE AND RELATED  
LICENCES IN THE 700 MHZ DUPLEX, 2.1 GHZ, 2.3 GHZ AND 2.6 GHZ  
BANDS) (AMENDMENT)

REGULATIONS 2022

S.I. No.            of 2022

WIRELESS TELEGRAPHY (LIBERALISED USE AND RELATED  
LICENCES IN THE 700 MHZ DUPLEX, 2.1 GHZ, 2.3 GHZ AND 2.6 GHZ  
BANDS) (AMENDMENT)  
REGULATIONS 2022

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 (Liberalised Use and Related Licences in the 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands) (Amendment) Regulations 2022.

*Interpretation*

2. (1) In these Regulations:

“Principal Regulations” means the Wireless Telegraphy (Liberalised use and related Licences in the 700 MHz duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz bands) Regulations 2021 (S.I. No 264 of 2021);

(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 the MBSA2 Liberalised Use Licence.

*Amendment of Regulation 2 of Principal Regulations*

4. (1) The Principal Regulations are amended by substituting the following for Regulation 2(1):

*“Interpretation*

*2. (1) In these Regulations:*

*“Time Slice 1” means, in relation to 2.1 GHz Band Blocks, 2.3 GHz Band Blocks and 2.6 GHz Band Blocks, such commencement date as may be specified by the Commission and ending on 11 March 2027;”.*

*Amendment of Regulation 5 of Principal Regulations*

5. (1) The Principal Regulations are amended by substituting the following for Regulation 5(1):

*“Duration of Licences*

*5. (1) The commencement date of a MBSA2 Liberalised Use Licence shall be specified in the Licence and, in respect of spectrum rights of use for:*

- (a) 700 MHz Duplex Blocks shall be such date as may be specified by the Commission;
- (b) 2.1 GHz Band Blocks, 2.3 GHz Band Blocks and 2.6 GHz Band Blocks in Time Slice 1 shall be such date as may be specified by the Commission; and
- (c) 2.1 GHz Band Blocks, 2.3 GHz Band Blocks and 2.6 GHz Band Blocks in Time Slice 2 shall be 12 March 2027.

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

day of 2022

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 2022

Minister for the Environment, Climate and Communications

DRAFT

**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 amendment of the commencement of MBSA2 Liberalised Use Licences granted for the 2.1 GHz Band under the Wireless Telegraphy (Liberalised Use and Related Licences in the 700 MHz Duplex, 2.1 GHz, 2.3 GHz and 2.6 GHz Bands) Regulation 2021.

DRAFT

## **Annex: 4 Non-confidential submissions to Document 22/63**

# **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 Information Notice**

**The potential issue of short-term rights in the 2.1 GHz band and possibly in other spectrum bands included in the Multi Band Spectrum Award**

**ComReg Document 22/63**



**2 August 2022**

**DOCUMENT CONTROL**

<b>Document name</b>	eir response to ComReg 22/63
<b>Document Owner</b>	eir
<b>Status</b>	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'.

Please note that, for the purposes of the Freedom of Information Act 2014 and the Communications Regulation Act 2002 (as amended) and in the context of the eir Group's general rights and obligations, information supplied by the eir Group to you may contain confidential, commercially sensitive or price sensitive information consisting of financial, commercial, technical or other information, whose disclosure to a third party could result in financial loss to the eir Group, could prejudice the competitive position of the eir Group in the conduct of its business, or could otherwise prejudice the conduct or outcome of contractual or other negotiations to which the eir Group is a party.

Accordingly, you are requested to contact a member of eir Group's Regulatory Strategy Team where there is a request by any party to have access to records which may contain any of the information herein and not to furnish any information before the eir Group has had an opportunity to consider the matter.

## Response to Information Notice

Following the Judgement on 21 July 2022 granting a Stay on progressing the long term award process, eir welcomes the early opportunity to emphasise the continued critical dependency on existing and new spectrum in supporting our customers and enhancing mobile connectivity.

In particular, there are two critical spectrum bands 700Mhz and 2100Mhz that require urgent action from ComReg to ensure customer experience is maintained and further improved during this period of uncertainty of spectrum availability.

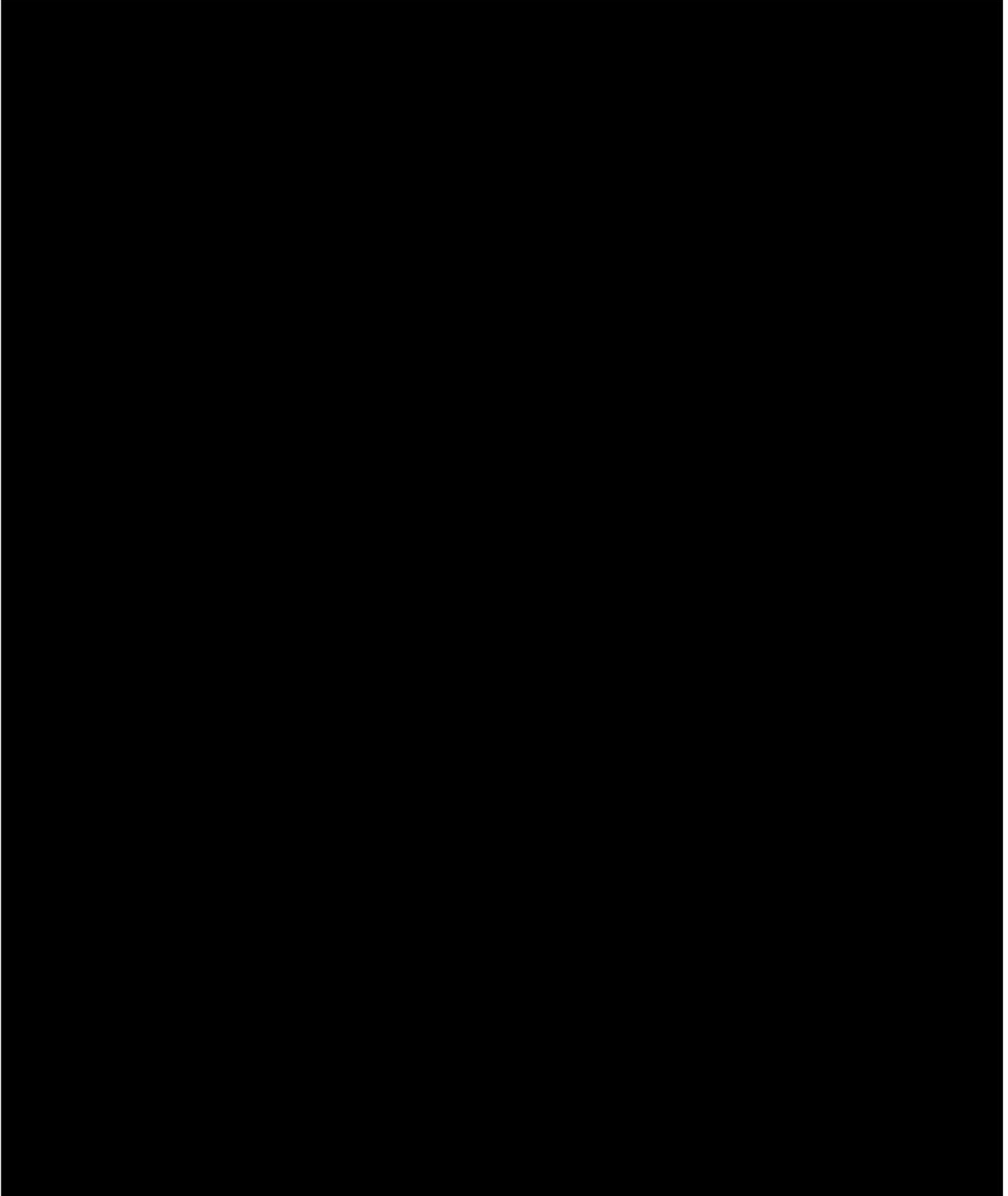
For both 700Mhz and 2100Mhz, ComReg must act immediately to remove uncertainty of spectrum rights and ensure a fair and balanced approach is implemented to eliminate risk to service degradation for customers pending the outcome of MBSA2.

### i) Justification for Short-term Rights

Data traffic growth in particular remains at levels in excess of generic growth and we continue to see COVID related impacts associated with a slow pace of return to office, continued remote working, and now an increase in visitor numbers to Ireland through 2022 post the restrictive travel in prior years.

In essence the effects of the COVID Pandemic remain as valid today as it did during the initial Government lock-down initiatives and it is broadly acknowledged that the COVID Pandemic is not over. Ireland continues to see rising case volumes that are expected to again surge in the autumn and winter months coupled with seasonal influenza.

eir has seen Data Traffic growth of    year to date in 2022 and while voice traffic has stabilised in 2022, it remains at an elevated level in comparison to pre pandemic years.



It is expected both Data and Voice traffic profiles will continue for the remainder of 2022 and into 2023.

eir has made extensive and continued investment in the mobile network over the last 4 years focusing on enhancing mobile service experience for customers, especially at a time when connectivity matters most.

As part of the investment, eir has utilised the Temporary Licensing arrangements for both 700Mhz and 2100Mhz.

For the 700Mhz band, eir has deployed active services across [REDACTED]. This investment has provided an additional capacity layer which has resulted in improved customer experience.

On a national network basis [REDACTED] of data traffic and [REDACTED] of voice traffic is supported on the 700Mhz band.

There is a greater dependency in Rural areas where [REDACTED] of Data traffic is supported on the 700Mhz band.

It is important to emphasise that the continuation of the 700Mhz temporary licensing rights beyond October is absolutely critical, until all uncertainty is removed on longer term spectrum rights and the award process concluded.

For the 2100Mhz band, eir has utilised all 15Mhz for the provision of enhanced data services for customers and has activated LTE 2100 on [REDACTED] upgraded sites under the temporary license arrangement.

On a national basis [REDACTED] of Data traffic and [REDACTED] of voice traffic is supported on the 2100Mhz band.

In urban areas, there is a greater dependency on the 2100Mhz band with [REDACTED] of data traffic and [REDACTED] of voice traffic supported on the band.

As noted, there is a very significant dependency on the temporary spectrum availability of both 700Mhz and 2100Mhz and a massive risk of a serious degradation in customer experience to the entire eir customer base if spectrum availability is constrained in any way. ComReg has the ability to issue short-term rights in the 700Mhz and 2100Mhz which can avoid entirely this issue and eir encourages ComReg to use those powers.

A confidential listing of 700Mhz & 2100Mhz activated sites are attached in the Annex.

## ii) Duration of the licensing framework

In consideration of the Stay granted, eir believes that temporary licensing or short-term licensing rights must now be applied as applicable, until the long-term spectrum award process can be concluded. eir proposes that ComReg implements spectrum management measures in the form of short-term or temporary licences for a period of up to a minimum of 6 - 9 months which may be shortened following conclusion of the MBSA2 award process.

This approach affords confidence for industry in continued investment and removes uncertainty of service degradation to customers.

## iii) The quantity of Spectrum

In reviewing the two critical bands of 700Mhz and 2100Mhz, eir believes that ComReg must expedite a process immediately to remove any uncertainty on spectrum availability and ensure that customer experience and continued enhancements can be enabled until long term spectrum rights can be concluded.

### **For 700Mhz:**

There is widespread deployment and a significant dependency on this spectrum band. The effects and impacts of the COVID pandemic remain an issue, with continued remote working and a slow return to office year to date, that will continue for the remainder of 2022 and into 2023.

The continued approach of temporary licensing for 700Mhz ensures no service degradation and affords operators certainty to continue investment and service enhancement for customers.

It is noted that the continuation and extension of the Temporary licence measures would be without prejudice to the long-term assignment of spectrum rights in the 700Mhz band.

**For 2100Mhz:**

eir proposes that ComReg now adopt an expedited process to enable all operators to avail of 20Mhz of liberalised contiguous spectrum in this band. This will require agreement among existing operators and agreement on transition activities ahead of 15 October.

eir believes that this would provide sufficient time to manage a transition process and see this approach as the only fair and balanced option when considering the full expiry of existing 2100Mhz spectrum for other existing operators on 15 October.

It is noted that a short term licensing rights agreement for 20Mhz of 2100Mhz would be without prejudice to the long-term assignment of spectrum in this band.

In the event that ComReg cannot secure agreement for a 20Mhz allocation, then a 15Mhz allocation of liberalised spectrum to the existing operators is considered by eir to be an appropriate fall-back option. A 15Mhz option for the existing operators would result in no transition activities in the main but would effectively result in an inefficient utilisation of spectrum until long term spectrum rights can be concluded.

**For 2300Mhz & 2600Mhz**

A temporary licence could be proposed on a site-by-site basis to facilitate operator demand until the long term award process can be concluded.

In this case temporary licensing on a site basis would apply only for the duration of the temporary licence period and would be without prejudice to the long term spectrum rights.

**iv) Geographic Scope**

All temporary or short-term licensing rights for 700Mhz and 2100Mhz must be on a full national and network basis and should not have any restrictions related to the existing deployed sites.

This approach ensures that operators can continue to invest and enhance mobile connectivity throughout Ireland and ensure the impact of the now delayed long term spectrum rights does not constrain customer experience in Ireland.

**v) Spectrum Fees**

All temporary or short term rights should be provisioned on the administrative fee basis of the Temporary COVID Licensing framework. Once the long-term award process is concluded all fees should be effective from 15 October 2022 and backdated as appropriate.

**vi) License Conditions**

License conditions should be on the basis of the Temporary COVID licensing process and should not be limited to the existing sites/apparatus deployed as of October 2022. It would not be appropriate to restrict customers from availing of enhanced mobile services and it is critical for an Operator to have continued confidence to their investment in site upgrades and new sites as relevant.

**vii) Technical Licence**

The temporary COVID licence arrangements have proven to be strong and appropriate measures to manage co-existence with other Electronic Communications Services. A continuation of this approach would seem most relevant until the long term spectrum rights can be concluded.

Annex 1 – ✂ REDACTED ✂

## **2 Three Ireland (Hutchison) Limited**

# **Short Term Licences**

**2100MHz and Other Bands**

**Response from Three**

**2<sup>nd</sup> August 2022**



**Three.ie**

## 1. Introduction

Three is pleased to respond to ComReg's call for input as requested in document 22/63. It is now essential that ComReg brings forward a licensing scheme to provide for short term licences in both the 2100MHz band and the 700MHz band in order to avoid significant harmful disruption to the provision of mobile services and consequently to consumers. We do not intend to recite the full background to the current situation, however in summary:

- 2100MHz spectrum has been in use by the mobile network operators (MNOs) in Ireland over the past 20 years.
- 700MHz spectrum has been in use by the mobile operators since April 2020 under the Covid Temporary Licensing scheme, which also included the liberalisation of Eir's 2100MHz licence.
- The original 2100MHz licences issued to Three and Vodafone will have expired by October 16<sup>th</sup>, while all 700MHz licences and Eir's liberalised 2100MHz licence will have expired by 2<sup>nd</sup> October.
- ComReg has stated that it had planned to re-award the spectrum by auction before October, thereby providing continuity of use of the spectrum in these bands (and continuity of service for consumers). Due to the on-going High Court proceedings, that licensing cannot now proceed and as a result a gap will emerge in the availability of the 700MHz and 2100MHz spectrum. The exact duration of this gap in continuity is unknown but is likely to be a short number of months.
- This gap in availability of spectrum would cause a significant degradation in the quality of and availability of mobile service in Ireland, with consequent disruption for consumers.
- It is essential that ComReg provides for short term licensing of both the 2100MHz and the 700MHz bands to avoid this disruption. It might be necessary for ComReg to consider other bands however Three does not comment on this point at this time.

While the Government restrictions that were introduced to prevent the spread of Covid-19 have now almost all been lifted, some of the consequences or effects of the pandemic remain. Changed patterns of work adopted during the pandemic have continued and have been adopted by many citizens with the expectation that they will continue. In addition, Government policy is to facilitate working from home. The short-term licensing of 700MHz spectrum has been in place for over two years now, providing an essential boost to coverage and capacity in rural areas which continues to facilitate home working and other pandemic-initiated behavioural changes. The requirement for continued use of 700MHz remains and there would be significant and unnecessary disruption to consumers if a gap in availability of a few weeks or months was allowed to emerge now.

Three's view is that ComReg must bring forward a licensing scheme that provides for licensing of the 700MHz and 2100MHz bands and could include any other bands deemed appropriate. Subject to our further comments below, the licensing scheme should operate in a similar way to the COVID-19 licensing scheme that is currently in place. In the following document we provide more detailed comments and respond to the points highlighted by ComReg in its Information Notice (22/63).

### **Inclusion of 700MHz**

Three's view is that it is essential for 700MHz to be included in a temporary licensing scheme now. While these licences were originally issued in response to the situation developing during the Covid-19 pandemic, it is nonetheless a fact that they have been in place for a continuous period of over two years now. During that time, mobile network operators have built-out significant networks using the 700MHz band which provides a valuable component of connectivity throughout the country today, especially in rural areas. Consumers have become used to the services provided on this band by all three network operators and the disappearance of these services now would be noticed by end users as reduced quality of service including cases where service would no longer be useable at all.

While restrictions on movements and other measures to control spread of Covid-19 have largely been removed at this time, some aspects of life will never return to their pre-Covid state. In particular, we notice that altered work habits and the rate of working from home has been permanently changed. We notice this in our network traffic where a significant part of the uplift in demand and changed location experienced during the pandemic has remained – normal growth has just been superimposed on top of it. There are also other indicators of this permanent change to consumer behaviour, e.g. in its November 2021 Pulse Survey, the CSO reports that the proportion of people working from home for some or all of the time has increased from 23% prior to the pandemic to 65% afterwards. Significantly the CSO reports that *"More than eight in 10 (85%) of those in employment whose job could be done remotely but who did not work remotely prior to the pandemic said they would like to do so when pandemic restrictions are no longer in place"*. Government policy has also changed in this area e.g. *"The Right to Request Remote Work Bill 2021 is part of the Government vision to make remote working a permanent feature of Ireland's workforce in a way that can benefit all – economically, socially and environmentally"*.

The 700MHz band tends to be used to provide coverage and capacity for 4G service in rural and suburban areas. The use of this band under temporary licences has primarily benefited people in suburban and rural areas. Its withdrawal from use would primarily impact people who live in these areas and who have become used to working from home at least some of the time over the last two years, but it would also have a broad impact on mobility of data services.

Three currently operates 700MHz spectrum from [redacted] which can provide 4G coverage service to over [redacted] of the population according to our internal coverage thresholds.

The map here shows current coverage provided by Three using 700MHz spectrum. We estimate that almost [redacted] customers of Three and its MVNOs can benefit from this coverage at present. At this time, over [redacted] of all 4G traffic is carried on the 700MHz band. This is the national figure, and in the short time to respond to this consultation we have not been able to segment this into urban vs rural areas. Obviously though the 700MHz band is of much more importance to people in rural areas and would account for a higher proportion of rural traffic.

The withdrawal of 700MHz licences at this time (or failure to provide for continuation) would cause a significant deterioration to or loss of service to the above consumers and it would not be possible to replace this in the short term. The impact will not be limited to Three but would be felt across all mobile networks. The customers worst affected are likely to be those in rural and suburban areas whom the Government has targeted in its remote working policy.

This disruption can be avoided without consequence by including the 700MHz band in a temporary licensing scheme to “bridge the gap” to the time when more long-term assignments have been made. The Covid-19 Temporary licences have been successful to date and Three recommends that ComReg use a similar format again to provide for temporary 700MHz (and also 2100MHz) licences.

### **The 2100MHz Band**

Prior to July 2022, Three was licensed to operate 6 lots of 2100MHz spectrum based on two separate Liberalised Use licences (3 lots of 2 x 5MHz each). The first of those licences expired on 24<sup>th</sup> July and Three now operates using 4 lots in the 2100MHz band under Interim 2100MHz licences. These can continue until 16<sup>th</sup> October.

The 2100MHz licences have been in use for 20 years and initially were the means by which 3G services were launched in Ireland and by which Three entered the market. They have been integral to the provision of mobile services ever since and remain a core service band upon which Three depends (as presumably other operators do also). The function of 2100MHz within Three’s overall network is different to that of the sub-1GHz bands. It is used primarily to provide 4G data capacity service in suburban and urban areas, although it is also used to a lesser extent for provision of voice 3G service.

The 2100MHz band is currently in use by Three on [redacted] sites and currently carries over [redacted] of Three’s 4G traffic. This capacity simply could not be compensated for using alternatives in a short timeframe. It should be noted that while Three recently reduced its use of 2100MHz from 6 lots to 4 (a consequence of the excessive licence fee), this has not been without consequences for its network. We have been able to minimise the impact of this change, however [redacted]. Any further reduction in use of 2100MHz or its loss would severely impact on the quality of data service provided to customers over 4G and would also have an impact on voice service. If we attempted to mitigate this harm using other mid-band spectrum, this would have a knock-on impact on the development of 5G services.

### **Use of Spectrum over Short-Term Licences**

Under short term licences, Three would continue to use the 700MHz and 2100MHz bands as today – primarily for 4G service with some voice service in the 2100MHz band for specific locations.

### **Licence Duration and General Terms**

The Covid-19 Temporary licences provided a successful framework for short-term licences and ComReg should replicate or continue the same scheme to the extent possible and appropriate. This would include technical licence terms and the duration. The provision for a three-month licence with the possible extension for a second period of three months would

seem to offer the greatest flexibility. A condition precedent of the licences could be that they terminate on the day of commencement of any long-term assignments resulting from MBSA 2. This would ensure continuity without delay to long-term licences while also minimising disruption through loss of service.

### **Quantity of Spectrum**

The purpose of the short-term licences is to provide for continuity of the status quo so as to avoid disruption brought about through loss of service. On that basis it would seem logical that they should provide for continuation of the currently licenced spectrum. For Three that means 2 lots of 700MHz and 4 lots of 2100MHz. As explained above, Three has had long-standing use of 6 lots of spectrum in the 2100MHz band. We have been able to reduce to 4 lots during the Interim licence period, however this has not been without difficulty and [Redacted Confidential Redacted]. We have an open view at this time as to whether other bands which are covered by MBSA 2 should be included in the short-term licences. We also note that there are 2 unused lots of spectrum in the 2100MHz band at present. It might be possible to use these free lots during the Interim or short-term licence period to “tidy-up” the assignments or prepare for transition. We recognise that this may be beyond the scope of the main purpose of the short term licences however we are open to considering this if ComReg believes it might be useful or would contribute to the efficient use of this band.

We note in paragraph 13 iii of the consultation document that ComReg seems to have linked Three’s decision to apply for 1 lot of 2100MHz spectrum in the “A” licence to a lifting of Covid-19 restrictions and apparently to the fact that “*growth in data has returned to normal and expected data growth, and consequently, capacity constraints previously due to COVID-19 are likely to have abated*”. We would point out that this is incorrect and that this is not the reason for Three choosing to continue using 4 lots instead of 6. Three could well have continued to use all 6 lots to its benefit, however the excessive price imposed by ComReg for the Interim Licences forced a reduction to 4 lots. ComReg is well aware of Three’s position on this matter from previous consultations.

### **Geographic Scope**

Current use of the spectrum in both the 700MHz and 2100MHz bands is nationwide and the short-term licences should provide for the same.

### **Spectrum Fees**

ComReg should adopt pricing principles for the short-term licences that are appropriate and fitting to the purpose and circumstances of those licences. Logically then, the same principle should apply to all spectrum included in the short-term licences, albeit there might be different fees for different bands or quantities of lots. There are a number of different precedents and previous learnings that ComReg could draw on for guidance here:

1. Other temporary licences

ComReg has in the past issued temporary licences for various purposes, including under the Test and Trial scheme, and also the 700MHz Covid-19 licences. In these cases, the licence fees are essentially nominal as the licences have a fixed short-term duration. We believe ComReg could apply this approach again in this case.

2. Administrative cost recovery

Another approach which is in keeping with the current regulatory framework is to simply set fees as appropriate to recover the administrative cost of providing the licences. As no long-term rights are to be awarded here, this could also be an appropriate approach.

### 3. Opportunity Cost

ComReg has previously attempted to determine interim licence fees on the basis of opportunity cost. This is prone to difficulty and error as it is impossible to determine the opportunity cost accurately or fairly. In the current circumstances, given that the purpose of the licences is to simply provide for continuity of existing services over the short term it is likely that there is no alternative demand for the spectrum beyond existing use. This would mean that the opportunity cost is zero and that ComReg should just apply a nominal or administrative fee.

### 4. Commercial Value

We note that in paragraph 13 of the information notice ComReg referred to Justice McDonald's judgment on Three's stay application as follows: "*spectrum fees, noting that Mr. Justice McDonald in his oral judgement stated that such fees should be commensurate with to [sic] the commercial value of the radio spectrum which is a point with which ComReg agrees and which aligns with the regulatory framework*". This is a surprising misrepresentation of the position expressed by Justice McDonald, all the more so given that that ComReg was party to the proceedings and is in possession of the transcript.

Mr. Justice McDonald did not say that such fees should be commensurate with the commercial value of the radio spectrum, he said "*For completeness, it should be noted that ComReg has expressed concern about State aid issues if the licence fee is pegged at the current rate of €100 but that seems to me to be capable of being addressed by imposing a commercial licence fee*". In fact he made no decision and gave no direction regarding the imposition of a licence fee. He merely reflected that ComReg had raised this as a concern but that he did not see as an impediment because it is capable of being addressed easily. He gave no instruction regarding how the fee should be set or on how to determine what is a commercial licence fee.

There is no established commercial value for such short-term licences. If ComReg was to seek a proxy for such value, then the only established reference would be the Spectrum Usage Fee that will apply to this spectrum following the award. This has been consulted on by ComReg previously and could be adopted on a pro-rata basis to the duration of the short-term licences to provide a proxy value for a licence fee. It would not be appropriate to include a component of the Spectrum Access Fee in the short-term licences. This component of the fee from the long-term licences reflects the value to licensees to obtain a 20-year licence. That does not apply in this case as licensees merely get short-term use of the spectrum.

Overall, we note that the purpose of the short-term licences is to provide for continuity of service for the benefit of consumers. The licence fee should not present an impediment to operators obtaining such continuity of spectrum. The licence fee imposed by ComReg for the Interim 2100MHz licences is excessive and has already acted as a barrier to Three extending its use of all 6 lots of 2100MHz spectrum, leaving 2 lots unused. This was pointed out to ComReg during the consultation process and has been acknowledged by ComReg's own

advisor Dr. Dan Maldoom in paragraph 23 a) of his recent report delivered to the court as evidence for Three’s stay application<sup>1</sup>. In this Document, Dr. Maldoom states the following:

*“a) The price paid for existing 2.1 GHz licences has already been acknowledged to likely be above reasonable estimates of current market value”*

Whatever approach to licence fees is adopted, ComReg must ensure that it does not similarly become a barrier to the take-up of those licences. To do so would defeat the whole purpose of short-term licences in the first place.

**Licensing Conditions**

As stated above, we believe the current Covid Temporary Licences have worked well and that ComReg should adopt a similar approach to any short-term licences issued now.

**Impact on 5G Services**

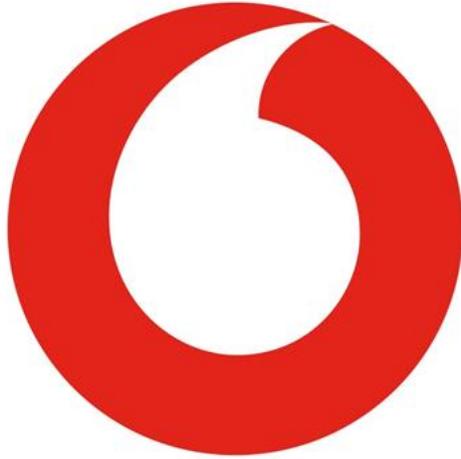
Finally, we note that the spectrum in the 700MHz and 2100MHz bands is used to provide 4G and 3G services. If short term licences are not made available, then it will be necessary for network operators to re-configure networks (to whatever extent that is possible) in an attempt to maintain current services. This re-configuration of networks would require the reduction of spectrum available for 5G services today and would set-back its development in Ireland.

[REDACTED]

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<sup>1</sup> EXHIBIT “3DM1” AS REFERRED TO IN THE THIRD AFFIDAVIT OF DAN MALDOOM

## **3 Vodafone Ireland Limited**



## Vodafone Response to Information Request

The potential issue of short-term rights in the 2.1 GHz band and possibly in other spectrum bands included in the Multi Band Spectrum Award

Reference: ComReg Doc 22/63

Date: 02/08/22

## Introduction

ComReg has invited views from interested parties in order to determine whether a short-term licensing framework is considered necessary and how it should be designed.

The requirement for shorter term licences in 2.1GHz and potential other bands is due to uncertainty arising from the Three challenge of ComReg decision D11/20. It has been indicated that a judgment is due in this case in a few months. Vodafone are a notice party to the Appeal of D11/20 (“the Decision”) and Vodafone believes that the ComReg Decision is legally sound.

Vodafone believe there is no need to increase uncertainty at this time and that the status quo in terms of 2.1GHz allocations and temporary 700MHz spectrum should remain in place pending judgment in the Three case. An extension 2.1GHz for a 6-month period in two 3-month blocks is ideally all that will be needed.

It is clear that Covid remains a “significant disruptive influence”<sup>1</sup> in Ireland. The 700MHz short-term extension will still be needed and the simplest approach would be to extend as per the covid temporary licensing regime for a further 6-month period. The strategy for Vodafone is using the temporary allocation was to focus the temporary allocation to underpin data connectivity in rural Ireland. In these locations the data levels remain well in excess of pre-covid forecasts. The long-term assignment of 700MHz is the optimum position however as it stands a temporary continuance is an absolute requirement for rural and regional connectivity. This is especially the case at the start of an uncertain winter period with potential seasonal impacts (such as flu and covid case escalations) that will drive demand to support remote working.

## Information request responses

ComReg have requested justification for the short-term temporary licensing of the 2.1 GHz band and, if appropriate, other spectrum bands. The table below sets out the Vodafone view for bands which Vodafone consider are necessary.

<b>(i) Justification for the short-term temporary licensing</b>
<b>The potential for consumer disruption and the location of same, should short term spectrum rights not be provided for</b>
Vodafone customers will be impacted without short-term temporary rights in 2.1GHz and 700MHz.  <b>2.1GHz:</b> The geographic locations impacted by the loss 2.1GHz are mainly concentrated in towns and cities. The spectrum now accounts for █████ of our Total Network Data Traffic and █████ of Total VoLTE traffic. The band is used for LTE at those sites where there is a high traffic demand. This has proved to be highly beneficial for customers with customers typically experiencing █████ higher data throughput at these sites than they did when 3G was used. Customers in these areas would notice a severe disruptive degradation in call connection, call-setup time, dropped call rate and data connectivity and throughput rate.  <b>700GHz:</b> Rural Ireland relies on Vodafone’s allocation of 700MHz for connectivity. 700MHz has brought a very significant improvement in service in rural areas and █████ of data at these sites now carried on this band. 700 MHz carries █████ of our Total Network Data Traffic and █████ of our Total Volte traffic, however we are very reliant on 700 MHz to provide coverage and capability in Rural/Suburban areas where Mid/High Band Frequencies struggle to meet customer requirements. In these areas 700 MHz accounts for █████ of Data Traffic and █████ of our VoLTE traffic This is as a direct result of the Covid pandemic. Without the 700-layer, remote workers and customers in congested areas of rural Ireland would face significant service

<sup>1</sup> [Martin: 'Disruptive' Covid phase hitting health service \(rte.ie\)](#)

issues. We estimate approximately [REDACTED] of sites will be impacted and Vodafone cannot build the additional sites required to replace coverage over the short term. To note:

- Vodafone have over [REDACTED] of 700MHz live on the network
- [REDACTED] of rural traffic is carried on 700MHz
- Congestion will rise significantly with the removal of 700MHz and [REDACTED], Customers do not have coverage from higher bands.

The effect of removal of 700MHz on the Vodafone network would be to rollback and remove the stability provided in the last 2 years to ensure connectivity standards have been maintained throughout more rural locations.

**The potential to use this spectrum band over the duration of any short-term licensing framework**

Vodafone is and will continue to use the spectrum on existing sites and equipment. This will provide excellent service to customers using both 2100MHz and 700MHz spectrum during a short-term licensing regime until MBSA2 completes, as anticipated, in the coming months.

As ComReg would understand it is very clear that it is uneconomic for Vodafone to use Temporary Spectrum to build new sites or add equipment at additional sites and it is likely it would also be uneconomic for other parties to use this spectrum in a short window.

The only measure to take that is consistent with the objective to ensure efficient management and use of spectrum is to extend 2.1GHz and 700MHz on a short-term basis.

**The number and location of existing sites, transmitters and apparatus licensed in the spectrum band**

Please see separate excel spreadsheet accompanying this submission.

**The percentage of total network voice and data traffic currently carried by the spectrum band**

As above

**2.1GHz** : Mainly concentrated in high traffic areas in Towns /Cities to provide additional Network Capability for Remote Working etc. 2100 now accounts for [REDACTED] of our Total Network Data Traffic and [REDACTED] of Total VoLTE traffic,

**700 MHz** carries [REDACTED] of our Total Network Data Traffic and [REDACTED] of our Total Volte traffic, however we are very reliant on 700 MHz to provide coverage and capability in Rural/Suburban areas where Mid/High Band Frequencies struggle to meet customer requirements. In these areas 700 MHz accounts for [REDACTED] of Data Traffic and [REDACTED] of our VoLTE traffic

**The potential to reconfigure existing networks, should short term spectrum rights not be provided in the spectrum band.**

Should temporary rights not be extended in the 2.1GHz band Vodafone would not be in a position to reconfigure existing networks to provide a service equal to the current network. In effect we would removing [REDACTED] of the installed cell capacity so this would have a detrimental impact on customers.

This is substantially because our network expansion plans cannot be resolved until the completion of MBSA2. Efficient use of spectrum is a much more efficient way of providing service rather than adding much more sites.

**(ii) Duration of any licensing framework**

Vodafone agree this should be for the minimum time necessary. A proven model adopted by ComReg for the temporary Covid licences has been to grant short term licences for a maximum of six months in two 3-month periods. Ideally only one 3-month period to January 2023 would be required however it is best to provide for a rollover if required.

**(iii) The quantity of spectrum to be assigned**

For 2.1GHz Vodafone considers continuance of existing allocations across and there should be minimal disruption or additional allocations required. For 700 MHz Vodafone considers the existing allocation under temporary covid licences is appropriate and can be implemented as per existing temporary process.

**(iv) The geographic scope of any licensing framework;**

The requirement for this spectrum is nationwide

**(v) Spectrum fees**

The simplest way to allocate for this short-period of a few months, taking into account case is to continue allocations on existing conditions and spectrum usage fees for the short period required.

1. Covid demands on networks are still elevated and could well increase during the Winter period if more remote working is needed; and
2. Pending judgment in the Three challenge.

This is the best way to ensure continuity of service for customers through a tried and tested allocation process.

**(vi) Licence conditions**

We agree that the purpose of the licensing framework is to mitigate consumer disruption by maintaining the existing levels of services for a short period of time beyond October 2022 completion of MBSA2. Changing traffic patterns may drive a small number of equipment changes and this should be permitted in the licence conditions.

**(vii) Technical licence conditions to ensure co-existence with other existing ECS**

The Technical licence conditions used to ensure co-existence with other existing Electronic Communications Services during the Covid temporary measures worked well and could be repeated to cover this period.

ENDS