An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Amendments to technical conditions for the 900 MHz and 1800 MHz bands

Implementation of EU Decision 2022/173

Response to Consultation and Decision

Reference: ComReg 24/52

Decision No: D18/24

Date: 21/06/2024

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Additional Information

Consultation Document	24/34
Submission to Consultation Document	Annex 3 of ComReg 24/52

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Chapter 1

1 Introduction

1.1 This document sets out the Commission for Communications Regulation's ("ComReg") response to consultation, final decision and draft regulations relating to proposed amendments to the relevant technical conditions for radio spectrum licences in the 900 MHz[1] and 1800 MHz[2] bands. These are currently set out in:

- Schedule 1 of the Multi-Band Spectrum Award ("MBSA1") Regulations;[3] and
- the MBSA1 Liberalised Use Licences ("MBSA1 Licences") issued to each of Meteor Mobile Communications Ltd. ("Eir"),[4] Hutchison 3G Ireland Ltd. and Three Ireland Hutchison Ltd.[5] (together "Three"), and Vodafone Ireland Ltd. ("Vodafone").

1.2 The proposed amendments would align the licence conditions in the MBSA1 Licences with the European Commission's ("EC") Implementing Decision (EU)2022/173[6] of 7 February 2022 on "*the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing electronic communications services in the Union and repealing Decision 2009/766/EC*" ("**Decision of 2022**") which:

- repealed the previous EC implementing decision for these bands, namely Decision 2009/766/EC[7] ("**Decision of 2009**") as amended by Decision

[1] The 900 MHz Band means the 880 to 915 MHz band paired with the 925 to 960 MHz band.

[2] The 1800 MHz Band means the 1710 to 1785 MHz band paired with the 1805 to 1880 MHz band.

[3] The Wireless Telegraphy (Liberalised Use and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz Bands) Regulations (S.I. 251 of 2012), available at https://www.irishstatutebook.ie/

[4] The name on the MBSA1 Licence originally issued to Meteor Mobile Communications Ltd. was subsequently changed to Eircom Ltd. trading as "eir").

[5] The name on the MBSA1 Licence originally issued to Telefonica Ireland Ltd. (O2) was subsequently changed to Three Ireland (Hutchison) Limited, following the acquisition of O2 by Three in 2014.

[6] Decision (EU)2022/173, "*Commission Implementing Decision of 7 February 2022 on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing electronic communications services in the Union and Repealing Decision 2009/766/EC*", available at www.europa.eu

[7] *Decision 2009/766/EC*, "*Commission Decision of 16 October 2009 on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community*", *available at* https://eur-lex.europa.eu/

2011/251/EU[8] ("**Decision of 2011**") and Decision (EU) 2018/637[9] ("**Decision of 2018**"), and the harmonised technical conditions set out in those EC implementing decisions; and

- sets out updated harmonised technical conditions[10] for the 900 MHz and 1800 bands and provides for advancements in digital and communications technologies, such as the emergence and integration of 5G and IoT technologies, and the use of Active Antenna Systems ("AAS").[11]

1.3 On 8 May 2024, ComReg published a consultation (Document 24/34[12]), outlining its proposed amendments to the technical conditions set out in the MBSA1 Licences and MBSA1 Regulations for the 900 MHz and 1800 MHz bands. In that regard, ComReg proposed:

(a) setting an in-block power limit of 67 dBm / (5 MHz) per antenna for broadband systems and 69 dBm / (200 kHz) per antenna for narrowband systems for non-AAS systems in the 900 MHz and 1800 MHz bands, given that this is the maximum limit set out in Decision of 2022; [13]

(b) setting an in-block power limit of 58 dBm / (5 MHz) per cell for AAS systems in the 1800 MHz band, given that this is the maximum limit set out in Decision of 2022; and

(c) adopting the out-of-block power limits set out in the Decision of 2022 for non-AAS and AAS Base Stations,

(together the "**Proposed Amendments**").

1.4 ComReg received one submission, from Three. In its submission, Three stated that

[8] Decision 2011/251/EU, "*Commission Implementing Decision of 18 April 2011 amending Decision 2009/766/EC on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community*", available at https://eur-lex.europa.eu/

[9] Decision 2018/637/EU, "*Commission Implementing Decision (EU) 2018/637 of 20 April 2018 amending Decision 2009/766/EC on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community as regards relevant technical conditions for the Internet of Things",* available at https://eur-lex.europa.eu/

[10] For terrestrial systems other than GSM, the Decision of 2022 sets out the technical parameters for base stations in the form of a Block Edge Masks which comprises of a number of elements including in-block power limits and out-of-block power limits.

[11] Active Antenna System (AAS) is a technology that uses electronically steerable antennas to improve network coverage and capacity.

[12] ComReg Document 24/34, "*Proposed amendments to technical conditions for the 900 MHz and 1800 MHz bands - Implementation of EU Decision 2022/173 and repeal of Decision 2009/766/EC*", published 8 May 2024, available at www.comreg.ie

[13] The Decision of 2022 provides for discretion in relation to the setting of in-block power limits for the 900 MHz and 1800 MHz bands.

"*Three Ireland notes the proposals and has no comments on them*".[14]

1.5 Considering that ComReg received no further submissions on its proposals, this document now sets out the background information, ComReg's final decision and draft amendment regulations in respect of the proposed approach set out in Document 24/34.

Structure of this document

1.6 This remainder of this document is structured as follows:

- Chapter 2 sets out background information on the existing MBSA1 technical conditions for the 900 MHz and 1800 MHz bands and an overview of the Decisions of 2009, 2011, 2018 and 2022;
- Chapter 3 set outs ComReg's final position on the Proposed Amendments;
- Chapter 4 outlines the next steps;
- Annex 1: sets out the amendments to the 900 MHz and 1800 MHz bands technical conditions in the MBSA1 licences;
- Annex 2: sets out the amendment regulations to be made by ComReg, subject to the consent of the Minister; and
- Annex 3: sets out Three's non-confidential submission to Document 24/34.

[14] The non-confidential version of Three's submission is contained in Annex 3 of this document.

Chapter 2

2 Background Information

2.1 Existing technical conditions for the 900 MHz and 1800 MHz band

2.1 In November 2012, ComReg announced the results of the MBSA1[15] and shortly thereafter issued a MBSA1 Licence to each of the winning bidders (the "MBSA1 Licensees"). All of the MBSA1 Licences commenced on 1 February 2013 and, among other things, these licences set out the spectrum rights of use licensed to each MBSA1 Licensee and their respective licence conditions. All four MBSA1 licences will expire on 12 July 2030.

2.2 The spectrum rights of each MBSA1 Licensee in the 900 MHz Band and the 1800 MHz band are detailed in Figure 1 below.

[15] See below ComReg Documents relating to MBSA1, available at www.comreg.ie:

- ComReg Document 12/131, *"Frequency Arrangements and Results of the Multi-Band Spectrum Award Process",* published 5 December 2012; and
- ComReg Document 12/123, *"Information Notice - Results of the Multi-Band Spectrum Auction",* published 15 November 2012 December 2022.

MBSA1 Licensee	Licence Commencement & Expiry	Quantum of Spectrum in Band	Spectrum Assignment	Licence Number
Meteor Mobile Communications	01 Feb 2013 to 12 July 2030	**800 MHz**: 2 x 10 MHz **900 MHz**: 2 x 10 MHz **1800 MHz**: 2 x 15 MHz	**800 MHz:** 832–842 / 791–801 MHz **900 MHz:** 880–890 / 925-935 MHz **1800 MHz:** 1770-1785/1865-1880 MHz	MLU1005
Three Ireland (Hutchison) Limited	01 Feb 2013 to 12 July 2030	**800 MHz**: 2 x 10 MHz **900 MHz**: 2 x 15 MHz **1800 MHz:** 2 x 35 MHz	**800 MHz:** 842-852 / 801-811 MHz **900 MHz:** 890-900 / 935-945 MHz & 910-915 / 955-960 MHz **1800 MHz:** 1710-1725 / 1805-1820 MHz & 1750-1770/1845-1865 MHz	MLU1006 MLU1008
Vodafone Ireland Limited	01 Feb 2013 to 12 July 2030	**800 MHz**: 2 x 10 MHz **900 MHz**: 2 x 10 MHz **1800 MHz**: 2 x 25 MHz	**800 MHz:** 852-862 / 811-821 MHz **900 MHz:** 900-910 / 945-955 MHz **1800 MHz:** 1725-1750 / 1820-1845 MHz	MLU1007

Figure 1: Licences in Ireland in the 900 and 1800 MHz band

2.3 The MBSA1 Licences and the MBSA1 Regulations contain technical conditions for the 900 MHz and 1800 MHz Bands based on the Decision of 2009, as amended by the Decision of 2011, which was the current decision at the time of MBSA1.

2.4 The technical conditions are set out in Part 4 “Licence Conditions” of the MBSA1 Licences.

2.2 European Commission implementing decisions on the harmonisation of the 900 MHz and 1800 MHz bands

2.5 In 2009, EC Decision 2009/766/EC set out the harmonised technical conditions for the 900 MHz and 1800 MHz bands and allowed for the introduction of new technologies at that time such as Universal Mobile Telecommunications Systems (“UMTS”) (3G) alongside existing Global System for Mobile Communications (“GSM”) (2G) networks.

2.6 In 2011, EC Decision 2011/251/EU amended Decision 2009/766/EC by setting out amended harmonised technical conditions that took account of the significant technological changes that had emerged at that time. The amendment was driven by the development and increasing market demand for advanced mobile communications such as Long-Term Evolution ("LTE") 4G and Worldwide Interoperability for Microwave Access[16] ("WiMAX") which was not provided for in the Decision of 2009.

2.7 In 2018, EC Decision (EU)2018/637 further amended Decision 2009/766/EC by setting out amended harmonised technical conditions to provide for a number of internet of Things ("IoT") technologies, being Extended Coverage GSM-IoT ("EC-GSM-IoT"), LTE Machine Type Communications ("LTE-MTC"), LTE evolved Machine Type Communications ("LTE-eMTC") and Narrowband IoT ("NB-IoT").

2.8 In 2022, EC Decision (EU)2022/173 repealed the Decision of 2009 and set out amended harmonised technical conditions to provide for advancements in digital and communications technologies such as the emergence and integration of 5G and IoT technologies, and the use of Active Antenna Systems ("AAS").

2.9 Article 3 of the Decision of 2022 requires Member States to take the following actions within 30 months from the adoption date of 7 February 2022 (i.e. by 7 August 2024).

> *"Article 3*
>
> *1. The terrestrial systems capable of providing electronic communications services that can coexist with GSM systems in the 900 MHz band within the meaning of Article 1(1) of Directive 87/372/EEC*[17] ***shall comply with the parameters set out in the Annex within 30 months from the adoption of this Decision****. (emphasis added)*
>
> *2. Member States* ***shall designate and make available, within 30 months from the adoption of this Decision****, on a non-exclusive basis, the 1 800 MHz frequency band for: (emphasis added)*
>
> *(a) GSM systems; and*

[16] WiMAX, the Worldwide Interoperability for Microwave Access, is a telecommunications technology aimed at providing wireless data over long distances in a variety of ways, from point-to-point links to full mobile cellular type access. It is the final leg of delivering wireless broadband connectivity from a communications provider to a customer and an alternative to cable and DSL. It is based on a on Broadband Wireless Access standard of the Institute of Electrical and Electronics Engineers (IEEE 802.16). WiMAX and Wi-Fi are complementary. While WiMAX is a broadband connection to the Internet at service quality, Wi-Fi is a wireless local area network

[17] Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (OJ L 321, 17.12.2018, p. 36), available at https://eur-lex.europa.eu.

(b) terrestrial systems capable of providing electronic communications services, in compliance with the parameters set out in the Annex."

2.10 In addition, Article 7 of the Decision of 2022 provided that the technical conditions of Decision of 2009 would remain applicable for 30 months from the adoption of the Decision of 2022:

"Article 7

***Decision 2009/766/EC is hereby repealed. Its Article 5 and its Annex shall remain applicable for 30 months** from the adoption of this Decision." (emphasis added)*

Chapter 3

3 ComReg's final position on the amendment to the MBSA1 technical conditions for the 900 MHz and 1800 MHz Bands

3.1 Summary of ComReg's proposals and response to Document 24/34

3.1 The Proposed Amendments align with the changes set out in the EC Decision of 2022 facilitating recent developments to the 900 MHz and 1800 MHz bands at a technical and regulatory level by:

- permitting the use of terrestrial systems referred to in the Decision of 2022; and
- deploying AAS Base Stations in the 1800 MHz band.

3.2 In that regard, ComReg proposed:

- setting an in-block power limit of 67 dBm / (5 MHz) per antenna for broadband systems and 69 dBm / (200 kHz) per antenna for narrowband systems for non-AAS systems in the 900 MHz and 1800 MHz bands, given that these are the maximum limits set out in the Decision of 2022;
- setting an in-block power limit of 58 dBm / (5 MHz) per cell[18] for AAS systems in the 1800 MHz band, given that this is the maximum limit set out in the Decision of 2022; and
- adopting out-of-block power limits set out in the Decision of 2022 for non-AAS and AAS Base Stations.

3.3 In addition, interested parties were referred to Annex 1 of Document 24/34 which outlined the Proposed Amendments, and Annex 2 of ComReg Document 24/34 which set out the draft proposed amending Wireless Telegraphy regulations.

3.4 ComReg received one response to Document 24/34, being from Three which stated that, "*Three Ireland notes the proposals and has no comments on them*". This response is available in Annex 3 of this document.

[18] In a multi-sector Base Station, the radiated power limit applies to each of the individual sectors.

3.2 ComReg's assessment and final position

3.5 Noting ComReg's assessment as set out in Document 23/34 and that there were no conflicting views received with regard to ComReg's proposals, ComReg's final position is that:

- it will implement the Proposed Amendments reflecting the Decision of 2022 and update the 900 MHz and 1800 MHz technical conditions in the MBSA1 Licences (see Annex 1 of this document); and
- following the making of amending regulations (see Annex 2 of this document for draft amending regulations), which is subject to obtaining consent from the Minister for Environment, Climate and Communications, it will issue amended MBSA1 licences to existing licensees.

Chapter 4

4 Next steps

4.1 To implement the decisions in this document, ComReg will continue its engagement the Department of the Environment, Climate and Communications and seek consent from the Minister for the Environment, Climate and Communications to make the amending regulations as outlined in Annex 2 of this document.

4.2 Following the making of the amending Regulations, ComReg would then amend the MBSA1 licence conditions for the 900 MHz and 1800 MHz bands. A draft licence showing these modified conditions can be found in Annex 1 of this document.

Annex 1: Draft MBSA1 Licence showing the proposed amendments

A 1.1 The amendments to the MBSA1 technical conditions for the 900 MHz and 1800 MHz Band in the MBSA1 Licences are shown below. The additions are in underlined text and the deletions are in ~~strikethrough text~~.

Part 4

Licence Conditions

1. General

(1) The Frequency Bands

[...]

(2) The Licensed Spectrum Blocks

[...]

(3) The Terrestrial Systems and Services

[...]

(4) Provision of Maps and Data

[...]

(5)

2. Technical Conditions

(1) The 800 MHz Band

[...]

[...]

[...]

[...]

[...]

(2) The 900 MHz and 1800 MHz bands

(a) The Frequency Division Duplex (FDD) method shall be used.

(b) In the 900 MHz band, radio transmitters that use the 925 to 960 MHz frequency space shall transmit in a downlink direction (i.e. 'Base Station' transmitters). Radio transmitters that use the 880 to 915 MHz frequency space shall transmit in an uplink direction (i.e. 'Terminal' transmitters).

(c) In the 1800 MHz band radio transmitters that use the 1805 to 1880 MHz frequency space shall transmit in a downlink direction (i.e. 'Base Station' transmitters). Radio transmitters that use the 1710 to 1785 MHz frequency space shall transmit in an uplink direction (i.e. 'Terminal' transmitters).

(d) **Only** Terrestrial Systems permitted under ~~Decision 2009/766/EC as amended by Decision 2011/251/EU~~ **the Decision of 2022** can be **worked and used** ~~deployed~~ in the 900 MHz band ~~and/~~or the 1800 MHz band**, or both.**

(e) In the absence of bilateral or multilateral agreements between neighbouring Licensees, the Licensee deploying a GSM system[19] in the 900 MHz **band** ~~and/~~or **the** 1800 MHz band**, or both**, is required to meet the ~~guard band~~ **frequency separation** obligation as set down in **Section 3 of the Decision of 2022** ~~Decision 2009/766/EC as amended by Decision 2011/251/EU~~.

(f) The Licensee shall comply with all MoU agreed from time to time between the Commission and the Ofcom, or its successor, in relation to the 900 MHz and 1800 MHz band, including ComReg Documents 11/50c, d, e and f.

(g) Within a 900 MHz Band Block assigned to the Licensee and for terrestrial systems other than GSM systems, the in-block radiated power from a Base Station transmitter in the downlink direction must not exceed:

i. **an EIRP of 67 dBm/5 MHz per antenna for non-AAS for a Broadband System;**
   and
ii. **an EIRP of 69 dBm/5 MHz per antenna for non-AAS for a Narrowband System.**

(h) Outside of the 900 MHz Band Block(s) assigned to the Licensee and for terrestrial systems other than GSM systems, the Licensee shall comply with the out-of -block BEM as specified in Section 4 of the Annex of the Decision of 2022.

(i) Within a 1800 MHz Band Block assigned to the Licensee, and for terrestrial systems other than GSM systems, the in-block radiated power from a Base Station transmitter in the downlink direction must not exceed:

i. **an EIRP of 67 dBm/5 MHz per antenna for non-AAS for a Broadband System;**

[19] ~~As defined in Decision 2009/766/EC as amended by Decision 2011/251/EU.~~

ii. **an EIRP of 69 dBm/5 MHz per antenna for non-AAS for a Narrowband System;**
and
iii. **a TRP limit of 58 dBm/5MHz per cell[20] for AAS.**

(j) Outside of the 1800 MHz Band Block(s) assigned to the Licensee and for terrestrial systems other than GSM systems, the Licensee shall comply with the out-of -block BEM as specified in Section 4 of the Annex of the Decision of 2022.

(k) Within a 900 MHz Band Block assigned to the Licensee, the maximum mean in-block power limit of 25 dBm[21] for Terminal Stations shall apply.

(l) Within a 1800 MHz Band Block assigned to the Licensee, the maximum mean in-block power limit of 25 dBm[21] for Terminal Stations shall apply.

3. Roll-out and Coverage Requirements

(1) The Minimum Coverage and Roll-out Requirement

[...]

(2) Definition of Coverage

[...]

4. Quality of Service (QoS) Obligations

(1) The Minimum "Availability of the Network" Standard

[...]

(2) The Minimum "Voice Call" Standard

[...]

(3) Reporting of Compliance

[...]

[20] **In a multi-sector Base Station, the AAS radiated power limit applies to each one of the individual sectors.**
[21] **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. A tolerance of up to + 2 dB has been included in this limit, to reflect operation under extreme environmental conditions and production spread.**

Annex 2: Draft amending regulations

A 2.1 **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.**

A 2.2 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 2024

_____

WIRELESS TELEGRAPHY (LIBERALISED USE AND PREPARATORY LICENCES IN THE 800 MHz, 900 MHz AND 1800 MHz BANDS) (AMENDMENT) REGULATIONS 2024

S.I. No. of 2024

WIRELESS TELEGRAPHY (LIBERALISED USE AND PREPARATORY LICENCES IN THE 800 MHz, 900 MHz AND 1800 MHz BANDS) (AMENDMENT) REGULATIONS 2024

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

Citation

1. These Regulations may be cited as the Wireless Telegraphy (Liberalised Use and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz Bands) (Amendment) Regulations 2024.

Interpretation

2. (1) In these Regulations:

"Principal Regulations" means the Wireless Telegraphy (Liberalised use and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz Bands) Regulations 2012 (S.I. No 251 of 2012).

(2) A word or expression that is used in these Regulations and that is also used in the Principal 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 Liberalised Use Licences.

Amendment of Regulation 2 of the Principal Regulations

4. (1) Regulation 2(1) of the Principal Regulations is amended –

(a) by inserting before the definition of "800 MHz Band" the following:

““3GPP” means the 3rd Generation Partnership Project;”,

(b) by inserting after the definition of “Act of 2002” the following:

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

(c) by inserting after the definition of “Base Price” the following:

““*Base Station” means Apparatus connected to a backhaul network, which provides a Radiocommunication Service to terminal stations*”,

(d) by inserting after the definition of “Bidder” the following:

““*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;*

“Broadband System” is a terrestrial system capable of providing electronic communications services operating in a channel larger than 200 kHz;”,

(e) by deleting the definition of “Decision of 2009”;

(f) by inserting after the definition of “Decision of 2010” the following:

““*Decision of 2022” means Commission Implementing Decision (EU) 2022/173 of 7 February 2022 on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems*

capable of providing electronic communications services in the Union and repealing Decision 2009/766/EC;

"Equivalent Isotropically Radiated Power" or "EIRP" is the product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (absolute or isotropic gain);",

(g) by inserting after the definition of "General Authorisation" the following:

""GSM" or "Global System for Mobile Communication" means a service consisting of the provision of a mobile telephony service of the kind referred to in the Annex to Council Recommendation 87/371/EEC of 25 June 1987",

(h) by inserting after the definition of "Licensee" the following:

""LTE" means the technology defined by 3GPP called Long Term Evolution;

"Narrowband System" is a terrestrial system capable of providing electronic communications services operating in a 200 kHz channel, excluding any GSM system;

"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;",

(i) by inserting after the definition of "Time Slice 2" the following:

""*Total Radiated Power" or "TRP" is a measure of how much power a composite antenna radiates. It equals the total conducted power input into the antenna array system less any losses in the antenna array system. TRP means the integral of the power transmitted in different directions over the entire radiation sphere;*

"UMTS" means the technology defined by 3GPP called Universal Mobile Telecommunications System;", and

(j) by inserting after the definition of "Upfront Fee" the following:

""WiMAX" means the technology defined by 3GPP called Worldwide Interoperability for Microwave Access;".

Amendment of Regulation 6 of the Principal Regulations.

5. (1) Regulation 6 (2) of the Principal Regulations is amended by substituting "Decision of 2022" for "Decision of 2009".

Amendment of Part 4 of Schedule 1 of the Principal Regulations.

6. (1) Section 2 of Part 4 of Schedule 1 to the Principal Regulations ("The 900 MHz and 1800 MHz bands") is amended –

(a) in subsection (2) –

i. by substituting paragraph (d) with the following: "*Only Terrestrial Systems permitted under the Decision of 2022 can be worked and used in the 900 MHz band or the 1800 MHz band, or both*.";

ii. by substituting paragraph (e) with the following: "*In the absence of bilateral or multilateral agreements between neighbouring Licensees, the Licensee deploying a GSM system in the 900 MHz band or the 1800 MHz band, or both, is required to meet the frequency separation obligation as set down in Section 3 of the Decision of 2022*";

iii. by inserting the following after paragraph (f):

"(g*) Within a 900 MHz Band Block assigned to the Licensee and for terrestrial systems other than GSM systems, the in-block radiated power from a Base Station transmitter in the downlink direction must not exceed:*

i. an EIRP of 67 dBm/5 MHz per antenna for non-AAS for a broadband system; and

ii. an EIRP of 69 dBm/5 MHz per antenna for non-AAS for a narrowband system;

(h) Outside of the 900 MHz Band Block(s) assigned to the Licensee and for terrestrial systems other than GSM systems, the Licensee shall comply with the out-of -block BEM as specified in Section 4 of the Annex of the Decision of 2022;

(i) Within a 1800 MHz Band Block assigned to the Licensee and for terrestrial systems other than GSM systems, the in-

block radiated power from a Base Station transmitter in the downlink direction must not exceed:

i. an EIRP of 67 dBm/5 MHz per antenna for non-AAS for a broadband system;

i. an EIRP of 69 dBm/5 MHz per antenna for non-AAS for a narrowband system;and

ii. a TRP limit of 58 dBm/5MHz per cell for AAS;

(j) Outside of the 1800 MHz Band Block(s) assigned to the Licensee and for terrestrial systems other than GSM systems, the Licensee shall comply with the out-of-block BEM as specified in Section 4 of the Annex of the Decision of 2022;

(k) Within the 900 MHz assigned to the Licensee, the maximum mean in-block power limit of 25 dBm for Terminal Stations shall apply; and

(l) Within a 1800 MHz Band Block assigned to the Licensee, the maximum mean in-block power limit of 25 dBm1 for Terminal Stations shall apply.".

7. (1) Section 3 of Part 4 of Schedule 1 to the Principal Regulations ("Roll-out and Coverage Requirements") is amended –

(a) in subsection (2) –

i. by deleting footnote 8 and footnote 9 in paragraph (a)(ii);

ii. by deleting footnote 10 in Table 5; and

iii. by deleting footnote 11 and footnote 12 in paragraph (b)(i).

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

2024

On behalf of the Commission for Communications Regulation

The Minister for the Environment, Climate and Communications (as adapted by the Communications, Climate Action and Environment (Alteration of Name of Department and Title of Minister) Order 2020 (S.I. No. 373 of 2020)), in

accordance with section 37 of the Communications Regulation Act, 2002, consents to the making of the foregoing Regulations.

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

2024

Minister for the Environment, Climate and Communications.

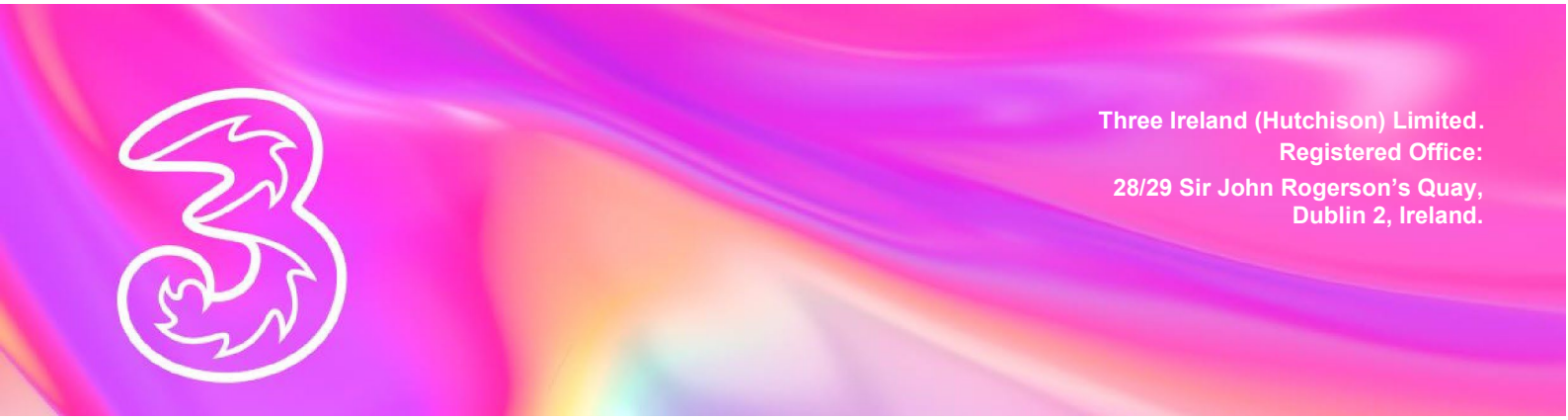
EXPLANATORY NOTE

(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 certain technical conditions relating to the 900 MHz and 1800 MHz Bands applying to Liberalised Use Licences granted under the Wireless Telegraphy (Liberalised Use and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz bands) Regulations, 2012 (S.I. 251 of 2012), the implementation of EU Decision 2022/173 and repeal of Decision 2009/766/EC.

Annex 3: Non-confidential submissions to Document 24/34

1. Three Ireland Hutchison Ltd. ("Three")



Mr. Martin O'Donoghue

Commission for Communications Regulation.

One Dockland Central, Guild Street,

Dublin, D01 E4X0

7th June 2024

Dear Mr. O'Donoghue

Proposed amendments to technical conditions for the 900 MHz and 1800 MHz bands

I refer to ComReg Consultation 24/34 relating to proposed amendments to technical conditions for the 900 MHz and 1800 MHz bands.

Three Ireland notes the proposals and has no comments on them.

Regards

Kieran Meskell
Wholesale Regulatory Manager
[✂ [redacted] ✂]
[✂ [redacted] ✂]