



STATUTORY INSTRUMENTS.

S.I. No. 251 of 2012



WIRELESS TELEGRAPHY (LIBERALISED USE AND PREPARATORY
LICENCES IN THE 800 MHz, 900 MHz AND 1800 MHz BANDS)
REGULATIONS 2012

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LICENCES IN THE 800 MHz, 900 MHz AND 1800 MHz BANDS)
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The Commission for Communications Regulation, in exercise of the powers conferred on it by section 6 (as substituted by section 182 of the Broadcasting Act 2009 (No. 18 of 2009)) of the Wireless Telegraphy Act 1926, (No. 45 of 1926) and with the consent of the Minister for Communications, Energy and Natural Resources, pursuant to 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) Regulations, 2012.

Interpretation

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

“800 MHz Band” means the 791 to 821 MHz band paired with the 832 to 862 MHz band;

“900 MHz Band” means the 880 to 915 MHz band paired with the 925 to 960 MHz band;

“1800 MHz Band” means the 1710 to 1785 MHz band paired with the 1805 to 1880 MHz band;

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

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

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

“Additional Price” has the meaning set out in the Information Memorandum;

“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 one or more of the 800 MHz, the 900 MHz and the 1800 MHz bands;

“Assignee” means a party to whom some or all of the rights and obligations under a Licence have been transferred;

*Notice of the making of this Statutory Instrument was published in
“Iris Oifigiúil” of 17th July, 2012.*

“Assignor” means the party from whom some or all of the rights and obligations under a Licence have been transferred;

“Auction” means the competitive award procedure used by the Commission for the purpose of granting rights of use for radio frequencies in the 800 MHz, 900 MHz and 1800 MHz bands, as detailed in the Information Memorandum;

“Auction Rules” means the rules and procedures relating to the Auction as set out in the Information Memorandum;

“Authorisation Regulations” means the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. 335 of 2011);

“Base Price” has the meaning set out in the Information Memorandum;

“Bidder” has the meaning set out in the Information Memorandum;

“Commission” means the Commission for Communications Regulation;

“CPI” means the Consumer Price Index as published from time to time by the Central Statistics Office or its successor;

“CPI Adjustment” means a negative or positive adjustment of the SUF, calculated using the CPI according to the methodology set out the by the Commission in the Information Memorandum;

“Decision of 2009” means the European Commission Decision 2009/766/EC, 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;

“Decision of 2010” means the European Commission Decision 2010/267/EU of 6 May 2010, on harmonised technical conditions of use in the 790-862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union;

“EMC Directive” means Directive 2004/108/EC of the European Parliament and of the Council of 15 December 2004, on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC;

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

“EURIBOR” means the Euro Interbank Offered Rate;

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

“General Authorisation” means an authorisation for an undertaking to provide an electronic communications network or service under and in accordance with Regulation 4 of the Authorisation Regulations;

“Harmful Interference” means interference which endangers the functioning of a Radionavigation Service or other safety services or which otherwise seriously degrades, obstructs or repeatedly interrupts a Radiocommunication Service operating in accordance with a requirement under the International Telecommunication Union Radio Regulations, a regulation of an institution of the European Union or legislation giving effect to an act, or provisions of an act, adopted by an institution of the European Union relating to the provision of an electronic communications service, electronic communications network or an associated facility or the radio frequency spectrum, or regulations made under the Act of 1926;

“Information Memorandum” means the information memorandum which was published on 25 May 2012 and set out in the Commission’s Document numbered 12/52 for the purposes of outlining in detail the processes and procedures the Commission would follow in running the Auction;

“Liberalised Use 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;

“Licence” means a Liberalised Use Licence or a Preparatory Licence, as the case may be;

“Licensee” means the holder of a Liberalised Use Licence or a Preparatory Licence, as the case may be;

“Non-exclusive”, in relation to a Licence, means that the Commission is not precluded from authorising the keeping and possession by other persons of other apparatus for wireless telegraphy on a Non-Interference and Non-Protected Basis in one or more of the 800 MHz, the 900 MHz and the 1800 MHz bands;

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

“Preparatory 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;

“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;

“Radionavigation Service” means a service involving the determination of the position, velocity and/or other characteristics of an object, or the obtaining of information related to its parameters, by means of the propagation properties of radio waves and used for the purposes of navigation, including obstruction warning;

“Reserve Price” means the relevant price as detailed in Schedule 3;

“Spectrum Block” means a 5 MHz paired block of spectrum in any of the 800 MHz, 900 MHz or 1800 MHz bands, respectively;

“Spectrum Usage Fee” or “SUF” has the meaning set out in the Information Memorandum;

“Time Slice 1” means the time period commencing on 1 February 2013 and ending on 12 July 2015 or on such other date or dates as may be specified by the Commission under Regulation 5 of these Regulations;

“Time Slice 2” means the time period commencing on 13 July 2015 and ending on 12 July 2030, or on such other date or dates as may be specified by the Commission under Regulation 5 of these Regulations;

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

“Upfront Fee” has the meaning set out in the Information Memorandum;

“Winning Bidder” has the meaning set out in the Information Memorandum; and

“Working Day” means a day which is not a Saturday or Sunday or a public holiday.

(2) In these Regulations:

- (a) a reference to an enactment or regulation shall be construed as a reference to the enactment or regulation as amended or extended by or under any subsequent enactment or regulation;
- (b) a reference to a Regulation or a Schedule is to a Regulation or Schedule to these Regulations, unless it is indicated that a reference to some other enactment is intended;
- (c) a reference to a paragraph or subparagraph is to the paragraph or subparagraph of the provision in which the reference occurs unless it is indicated that reference to some other provision is intended; and
- (d) a reference to a Directive of the European Parliament and Council shall be the Directive as amended or extended by any subsequent Directive.

(3) 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.

(4) 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.

(5) 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.

(6) The Interpretation Act 2005 (No. 23 of 2005) applies to these Regulations.

Licences to which these Regulations apply

3. (1) These Regulations apply to:

(a) Liberalised Use Licences, and

(b) Preparatory Licences,

in the form of the respective Licences set out in Schedules 1 and 2 to these Regulations.

Application for the Grant and Form of Licences

4. (1) Application for the grant of any Licence to which these Regulations apply shall be made by a Winning Bidder to the Commission in writing, and in such form as may be determined by the Commission from time to time.

(2) A person who makes an application under paragraph (1) shall furnish to the Commission such information as the Commission may reasonably require for the purposes of these Regulations, and if the person, without reasonable cause, fails to comply with this paragraph, the Commission may refuse to grant the Licence concerned to the person.

(3) The Commission may grant a Liberalised Use Licence or a Preparatory Licence to which these Regulations apply following payment by the applicant of the relevant fees prescribed in Regulation 8.

(4) A Liberalised Use 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.

(5) A Preparatory Licence to which these Regulations apply shall be in the form specified in Schedule 2, with such variation, if any, whether by addition, deletion or alteration as the Commission may determine from time to time or in any particular case.

Duration of Licences

5. (1) The commencement date of a Preparatory Licence to which these Regulations apply shall be set by the Commission and specified in the Preparatory Licence. Unless it has been withdrawn or had its duration amended under Regulation 7(2) and in accordance with the Authorisation Regulations, a Preparatory Licence to which these Regulations apply, shall in any event expire on such date as may be determined by the Commission and as specified in the Preparatory Licence.

(2) (a) The commencement date of a Liberalised Use Licence to which these Regulations apply shall be specified in the Liberalised Use Licence, and, in respect of:

(i) Time Slice 1, shall be 1 February, 2013 or such other date as may be specified by the Commission; and

(ii) Time Slice 2, shall be 13 July, 2015 or such other date as may be specified by the Commission.

(b) A Liberalised Use Licence to which these Regulations apply, unless it has been withdrawn or had its duration amended under Regulation 7(2) and in accordance with the Authorisation Regulations, shall in any event expire:

(i) in the case of Time Slice 1 on 12 July 2015 or such other date as may be specified by the Commission; and

(ii) in the case of Time Slice 2 on 12 July 2030.

Conditions of Licences

6. It shall be a condition of any Licence to which these Regulations apply, that the Licensee shall:

(1) ensure that it complies with the conditions contained within the Licence concerned and these Regulations;

(2) ensure that any Apparatus in the 800 MHz band complies with the Decision of 2010, and that Apparatus in the 900 MHz band and 1800 MHz band complies with the Decision of 2009;

(3) ensure that Apparatus installed, maintained, possessed or kept under the Licences is capable of operating on the radio frequency spectrum specified in the Liberalised Use Licence;

(4) ensure that where the Apparatus is worked or used, as appropriate, it is worked or used on such radio frequency spectrum:

(a) as specified in the Liberalised Use Licence; or

(b) to which the Licensee has a right of use for radio frequencies pursuant to an agreement entered into with a holder of a licence under the Act

of 1926 in accordance with procedures specified by the Commission, if any, from time to time,

or both;

(5) comply with any rules to prevent spectrum hoarding as may be laid down by the Commission under the Framework Regulations;

(6) ensure that it makes payment of the fees set out in Regulation 8;

(7) ensure that in each calendar year in which the Licence concerned is in force, and in any event on or before the anniversary of the Licence Commencement Date of each such year, it submits updated information to the Commission in respect of Parts 2 and 3 of its Liberalised Use Licence;

(8) furnish such information and reports as may be requested by the Commission from time to time;

(9) ensure that the Apparatus, or any part thereof, shall be installed, maintained, and where a Liberalised Use Licence is held, worked and used, so as not to cause Harmful Interference;

(10) ensure that the Apparatus or any part thereof, complies with Annex 1 of the EMC Directive;

(11) comply with any special conditions imposed under section 8 of the Act of 1972;

(12) (a) notify the Commission, not less than 6 months prior to the proposed cessation of use of any terrestrial system listed in Schedule 1 to which the Liberalised Use Licence relates and;

(b) use all reasonable endeavours, to ensure that any adverse effects on users from the cessation of use of a terrestrial system are minimised;

(13) 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 within 5 Working Days;

(14) comply with all obligations under relevant international agreements relating to the use of Apparatus or the frequencies to which they are assigned;

(15) notify the Commission of its intention to transfer any rights of use for radio frequencies attaching to a Licence under paragraph 16;

(16) subject to paragraph 17, only transfer the rights of use for radio frequencies attaching to a Licence in accordance with procedures as may be specified by the Commission from time to time on the transfer of rights and obligations of a Wireless Telegraphy licence;

(17) where the Commission has not yet put in place procedures governing the transfer of rights of use for radio frequencies attaching to Licences, not, without

the prior consent of the Commission, which shall not be unreasonably withheld, transfer any such rights of use attaching to a Licence;

(18) ensure that if the address of the Licensee or its Assignee changes, the Licensee or Assignee shall, as soon as possible, but in any event within 28 days, notify the Commission in writing of the change;

(19) ensure that any Assignee enters into a valid binding agreement to comply with all obligations under both these Regulations and the Licences issued pursuant to these Regulations and to provide to the Assignor or Commission, as appropriate, such details as the Commission is entitled to require from a Licensee from time to time.

Enforcement, Amendment, Withdrawal and Suspension

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 any Licence from time to time in accordance with the Authorisation Regulations.

(3) Without prejudice to paragraph (2), at the request of the Licensee, the Commission may, if it considers it appropriate to do so, amend a Licence by adding to, deleting from, or altering the radio frequencies specified in the Licence, on which the Apparatus may be used. Any such amendment shall be effected by notice in writing from the Commission specifying the amendment and given to the Licensee or sent to the Licensee at the address specified in the Licence or notified to the Commission pursuant to the Licence and these Regulations.

(4) A Licence may be suspended or withdrawn by the Commission in accordance with the Authorisation Regulations.

(5) A Licence may be suspended or withdrawn by the Commission if, after the grant of a Licence pursuant to these Regulations, it emerges that the Licensee has breached the Auction Rules.

Licence Fees

8. (1) The fee for a Liberalised Use Licence is the sum of the Upfront Fee and the Spectrum Usage Fees over the duration of the Licence less any rebates or adjustments or refunds applicable to the Licensee, as identified in the Information Memorandum.

(2) The Reserve Price per Spectrum Block, per Spectrum band and per Time Slice, is detailed in Schedule 3.

(3) The Additional Price for a Liberalised Use Licence is determined using the pricing methodology set out in the Information Memorandum.

(4) The Spectrum Usage Fee for a Liberalised Use Licence is the sum of the SUFs associated with each Spectrum Block in the Liberalised Use Licence as set out in paragraph 5.

(5) The annual Spectrum Usage Fee payable shall be:

- (a) the sum of €1.08 million and the CPI Adjustment for each Spectrum Block in the 800 MHz band;
- (b) the sum of €1.08 million and the CPI Adjustment for each Spectrum Block in the 900 MHz band;
- (c) the sum of €0.54 million and the CPI Adjustment for each Spectrum Block in the 1800 MHz band; and
- (d) in the case of a Spectrum Usage Fee, for a period of less than one year, the SUF for each Spectrum Block shall be the relevant sum as detailed in sub paragraphs (a), (b) and (c), adjusted on a pro rata daily basis for such period.

(6) Where the commencement date of the Liberalised Use Licence is delayed in Time Slice 1 or in Time Slice 2 due to circumstances as described in the Information Memorandum, a Licensee shall be entitled to an adjustment of the Licence Fees payable or a refund of Licence Fees already paid, as provided for in section 2.2.6 of the Information Memorandum.

(7) The Upfront Fees specified in paragraphs, (2) and (3) of this Regulation less any rebates, adjustments or refunds applicable to the Licensee shall be paid to the Commission on a date specified by the Commission in accordance with the Information Memorandum, by way of banker's draft or such other means and on such other terms, if any, as the Commission may decide. Where the date of payment falls on a day other than a Working Day, payment shall be made on or before the last Working Day before the date on which payment would otherwise have fallen due.

(8) The Spectrum Usage Fees specified in paragraphs, (4) and (5) of this Regulation, less any rebates, adjustments or refunds applicable to the Licensee, shall be paid to the Commission prior to the grant of a Liberalised Use Licence or prior to the anniversary of the Licence Commencement Date of each respective calendar year within the duration of the Liberalised Use Licence, as the case may be, by way of banker's draft or such other means and on such other terms, if any, as the Commission may decide. Where the date of payment falls on a day other than a Working Day, payment shall be made on or before the last Working Day before the date on which payment would otherwise have fallen due.

(9) If a Liberalised Use Licence is suspended or withdrawn under Regulation 7(4) or Regulation 7(5), the Licensee shall not be entitled to be repaid any part of the Upfront or Spectrum Usage Fee, paid by the Licensee under this Regulation, but shall still be liable to pay any sums, including interest, that are outstanding.

(10) If the amount of radio frequency spectrum specified in a Liberalised Use Licence is reduced under Regulation 7(3), the Licensee may be entitled to a refund of Spectrum Usage Fees already paid and a reduction on future SUFs on a pro-rata basis having regard to the nature of the amendment. The Licensee shall not be entitled to any refund of its Upfront Fee.

(11) If the duration of a Liberalised Use Licence is reduced at the request of the Licensee, the Licensee may be entitled to a refund of Spectrum Usage Fees already paid, on a pro-rata basis having regard to the reduced duration. The Licensee shall not be entitled to any refund of its Upfront Fee.

(12) The fee for a Preparatory Licence is €100.

(13) Failure by a Licensee to make a Spectrum Usage Fee payment on or before the date it falls due under paragraph 8 of this Regulation constitutes non-compliance by the Licensee with these Regulations. The Commission, in addition to enforcement actions in accordance with Regulation 7 of these Regulations, may take steps to recover the fees due in accordance with paragraphs (14) and (15) of this Regulation.

(14) Where payment of any fee is not made in due time, then the Licensee shall pay to the Commission interest on the fees or part thereof that is outstanding at the appropriate EURIBOR rate, between the date when such fee or part fell due and the date of payment of such fee or part.

(15) An amount payable by a person in respect of a fee under this Regulation may be recovered by the Commission from the person as a simple contract debt in any court of competent jurisdiction.

Licensee to satisfy all Legal Requirements

9. (1) Licences granted pursuant to these Regulations do not grant to the Licensee any right, interest or entitlement other than the right to keep, and have possession of, install, and maintain, and additionally in the case of a Liberalised Use Licence, to work and use, at a specified location or locations in the State, apparatus for wireless telegraphy for terrestrial systems capable of providing Electronic Communications Services.

SCHEDULE 1

WIRELESS TELEGRAPHY ACT, 1926

WIRELESS TELEGRAPHY (LIBERALISED AND PREPARATORY
LICENCES IN THE 800 MHz, 900 MHz AND 1800 MHz BANDS)
REGULATIONS 2012

Liberalised Use Licence for terrestrial systems capable of providing Electronic
Communications Services

Licence under section 5 of the Wireless Telegraphy Act, 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 (as substituted by section 182 of the Broadcasting
Act 2009 (No. 18 of 2009)) of the Wireless Telegraphy Act, 1926 (No. 45 of
1926), hereby grants to the Licensee specified _____ of _____.

Authorisation to keep and have possession of apparatus for wireless telegraphy
for terrestrial systems capable of providing Electronic Communications Services
as specified in Part 2 to this Licence, subject to such apparatus being installed,
maintained, worked and used in accordance with the terms and conditions and
restrictions set out in the Wireless Telegraphy (Liberalised Use Licence and
Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz band) Regu-
lations, 2012 (S.I. No. 251 of 2012) (“the Regulations”), including, but not lim-
ited to, the following:

- (1) The Licensee shall ensure that it complies with all of the conditions con-
tained within the Regulations, under which this Licence is issued, and
within Parts 1 to 4 of this Licence; and
- (2) The Licensee shall ensure that it makes payment of all fees as detailed
in the Regulations under which this Licence is issued.

This Licence shall come into effect on DD/MM/YY (the “Licence Commence-
ment Date”) and, subject to revocation, suspension or withdrawal, expires on
DD/MM/YY (the “Licence Expiry Date”).

Signed: _____

For and on behalf of the Commission for Communications Regulation

Date of Issue: _____

Official Stamp

Part 1

Commencement and Expiry dates per Spectrum Block

Authorised Band	Name of Spectrum Block	Uplink / Downlink Frequency Assigned to Spectrum Block	Commencement Date per Spectrum Block	Expiry Date per Spectrum Block
<i>800, 900 or 1800MHz as appropriate</i>	Block A, B, C etc.	From _____MHz to _____MHz	DD Month YYYY	DD Month YYYY

Part 2

The Apparatus to which this Licence applies

Equipment Index Reference	Terrestrial System	Equipment Description	Manufacturer	Model

Part 3

Apparatus Location and Details

(1) 800 MHz band

Site Identity	Eastings	Northings	Equipment Index Reference	Maximum EIRP¹

(2) 900 MHz band

Site Identity	Eastings	Northings	Equipment Index Reference	Maximum EIRP

(3) 1800 MHz band

Site Identity	Eastings	Northings	Equipment Index Reference	Maximum EIRP

¹ EIRP is the Equivalent Isotropically Radiated Power

Part 4**Licence Conditions****1. General**

(1) The Frequency Bands

- The “800 MHz band” means the 791 to 821 MHz band paired with the 832 to 862 MHz band;
- The “900 MHz band” means the 880 to 915 MHz band paired with the 925 to 960 MHz band;
- The “1800 MHz band” means the 1710 to 1785 MHz band paired with the 1805 to 1880 MHz band.

(2) The Licensed Spectrum Blocks

“Licensed Spectrum Block(s)” means the Spectrum Blocks set out in Part 1 of the Licence.

(3) The Terrestrial Systems and Services

“Terrestrial Systems” means terrestrial systems capable of providing electronic communications services that are in compliance with the technical implementing measures adopted pursuant to 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 European Community (“Radio Spectrum Decision”) and in conformity with the standards referred to in Sections 1 to 4 of this Schedule.

(4) Provision of Maps and Data

For the purposes of carrying out coverage (see Section 3) and quality of service (see Section 4) compliance checks, the Licensee shall, on request, provide to the Commission the following:

- (a) Maps showing Coverage as defined in Section 3 of this Schedule;
- (b) An up-to-date list of the locations of the ‘Base Station’² transmitters;
- (c) An adequate number of test numbers.

2. Technical Conditions

(1) The 800 MHz band

- (a) The Frequency Division Duplex (FDD) method shall be used. Radio transmitters that use the 791 to 821 MHz frequency space shall transmit in a downlink direction (i.e. ‘Base Station’ transmitters). Radio

² Repeaters are also included as a Base Station for the purposes of this Licence.

transmitters that use the 832 to 862 MHz frequency space shall transmit in an uplink direction (i.e. ‘Terminals’ transmitters).

- (b) Terrestrial Systems compatible with Decision 2010/267/EU can be deployed in the 800 MHz band.
- (c) Within a Spectrum Block for which the Licence holder has a Licence, the in-block radiated power from a Base Station transmitter in the downlink direction must not exceed a mean in block power of 59 dBm/5 MHz EIRP.³
- (d) Outside of a Spectrum Block for which the Licence holder has a Licence, the Licensee shall comply with the out-of-block Block Edge Mask (BEM) as specified in Table 1 to Table 4 below

Table 1: Baseline Requirements — Base Station BEM out-of-block EIRP limits

Frequency Range Of Out-Of-Block Emissions	Maximum Mean Out-Of-Block EIRP	Measurement Bandwidth
832 — 862 MHz (Frequencies used for FDD uplink)	-49.5 dBm	5 MHz

Table 2: Transition Requirements — Base Station BEM out-of-block EIRP limits per antenna over FDD downlink frequencies 791 to 821 MHz

Frequency Range Of Out-Of-Block Emissions	Maximum Mean Out-Of-Block EIRP	Measurement Bandwidth
-10 to —5 MHz from lower block edge	18 dBm	5 MHz
-5 to 0 MHz from lower block edge	22 dBm	5 MHz
0 to +5 MHz from lower block edge	22 dBm	5 MHz
+5 to +10 MHz from lower block edge	18 dBm	5 MHz
Remaining FDD downlink frequencies	11 dBm	1 MHz

Table 3: Transition Requirements — Base Station BEM out-of-block EIRP limits per antenna (for one to four antennas) over frequencies used as guard bands

Frequency Range Of Out-Of-Block Emissions	Maximum Mean Out-Of-Block EIRP	Measurement Bandwidth
Guard band between 790 MHz and 791 MHz	17.4 dBm	1 MHz
Duplex Gap guard band 821 — 832 MHz	15 dBm	1 MHz

³ EIRP stands for Equivalent Isotropically Radiated Power.

Table 4: Baseline requirements — Base Station out-of-block EIRP limits over frequencies below 790 MHz

Frequency Range Of Out-Of-Block Emissions	Conditions On Base Station In-Block EIRP, P dBm/10 MHz	Maximum Mean Out-Of-Block EIRP	Measurement Bandwidth
470 — 790 MHz	$P \geq 59$	0 dBm	8MHz
	$36 \leq P < 59$	(P-59) dBm	8MHz
	$P < 36$	-23 dBm	8MHz

- (e) The Licensee shall comply with all Memoranda of Understanding (“MoU”) agreed from time to time between the Commission and the national regulatory authority responsible for communications matters in the UK, (“Ofcom”), or its successor, in relation to the 800 MHz band, including ComReg Document 12/47⁴.
- (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) Terrestrial Systems permitted under Decision 2009/766/EC as amended by Decision 2011/251/EU can be deployed in the 900 MHz band and/or the 1800 MHz band.
- (e) In the absence of bilateral or multilateral agreements between neighbouring Licensees, the Licensee deploying a GSM system⁵ in the 900 MHz and/or 1800 MHz band is required to meet the guard band obligation as set down in 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.⁶

⁴ <http://www.comreg.ie/—fileupload/publications/ComReg1247.pdf>

⁵ As defined in Decision 2009/766/EC as amended by Decision 2011/251/EU.

⁶ <http://www.comreg.ie/—fileupload/publications/ComReg1150c.pdf>;
<http://www.comreg.ie/—fileupload/publications/ComReg1150d.pdf>;
<http://www.comreg.ie/—fileupload/publications/ComReg1150e.pdf>;
<http://www.comreg.ie/—fileupload/publications/ComReg1150f.pdf>;

3. Roll-out and Coverage Requirements

(1) Minimum Coverage and Roll-out Requirement

In the case of an existing GSM or 3G licensee⁷, which for the avoidance of doubt excludes Mobile Virtual Network Operators (MVNOs) without GSM or 3G spectrum rights of use, being granted a Liberalised Use Licence:

- The Licensee shall ensure the attainment of, and maintain, a coverage level of at least 70% of the population within 3 years of the Licence Commencement Date as set out in the Licence.

In the case of entity that does not have a GSM or 3G licence, which by definition includes MVNOs which do not have GSM or 3G spectrum rights of use, being granted a Liberalised Use Licence:

- The Licensee shall ensure the attainment of, and maintain, a coverage level of at least 35% of the population within 3 years and 70% of the population within 7 years of the Licence Commencement Date as set out in the Licence.

(2) Definition of Coverage

(a) Terrestrial Systems in the 800 MHz, the 900 MHz or the 1800 MHz bands

- (i) Where the Licensee has deployed more than one Terrestrial System in the 800 MHz, the 900 MHz and/or the 1800 MHz band, it is the combined coverage of these Terrestrial Systems that counts towards the minimum coverage and roll-out obligation set out in this Licence.
- (ii) Determining whether the Licensee has coverage shall be calculated as follows:
 - For measurement purposes, an average pilot signal will be measured outdoors at a height of 1.5m;
 - For propagation prediction systems a pilot signal over 95% of the area during 95% of the time is required;
 - The coverage level specification per frequency band, per bandwidth and per Terrestrial System is set out in Table 5 below.
 - Where both a FS and an Ec/Io or BLER metric are specified in Table 5 for a particular Terrestrial System (i.e. UMTS⁸ and LTE⁹), an area will be deemed to have coverage where

⁷ An existing GSM or 3G licensee is an Existing Mobile Network Operator as defined in the Information Memorandum, ComReg Document 12/52.

⁸ As defined in Decision 2009/766/EC as amended by Decision 2011/251/EU.

⁹ As defined in Decision 2011/251/EU.

the E_c/I_o or BLER exceeds the levels as set out in Table 5, even if the FS is less than the value shown in the Table 5.

- Where a FS metric is the only metric specified in Table 5 for a particular Terrestrial System (i.e. GSM), an area will be deemed to have coverage where the FS in Table 5 below is met.

Table 5: The coverage level specification per frequency band, per bandwidth and per terrestrial system

Terrestrial Systems ¹⁰ and Bandwidth	800MHz FS (dB(μ V/m))	800MHz E_c/I_o or BLER	900MHz FS (dB(μ V/m))	900MHz E_c/I_o or BLER	1800MHz FS (dB(μ V/m))	1800MHz E_c/I_o or BLER
GSM (0.2MHz)	45	N/A	46	N/A	54	N/A
UMTS (5MHz)	49	-8	50	-8	57	-8
LTE (5MHz)	47	10^{-2}	48	10^{-2}	55	10^{-2}
LTE (10MHz)	44	10^{-2}	45	10^{-2}	52	10^{-2}
LTE (15MHz)	42.5	10^{-2}	43.5	10^{-2}	50.5	10^{-2}
LTE (20MHz)	41	10^{-2}	42.5	10^{-2}	49.5	10^{-2}

Where:

FS = Field Strength;

BLER = Block Error Rate; and

E_c/I_o = The ratio of the received energy per chip and the interference level.

(b) Other Terrestrial Systems in the 800 MHz, the 900 MHz or the 1800 MHz bands

- (i) Insofar as, over the lifetime of this Licence, WiMAX¹¹ or other terrestrial systems¹² may also be deployed in one or more of the 800 MHz, the 900 MHz and the 1800 MHz bands, the Commission will set a measurement standard¹³ for these when appropriate.

¹⁰ As defined in EC Decision 2009/766/EC as amended by Decision 2011/251/EU.

¹¹ As defined in EC Decision 2009/766/EC as amended by Decision 2011/251/EU.

¹² Other terrestrial systems” means an electronic communications network not otherwise listed in this Annex that complies with Decision 2010/267/EU (for the 800 MHz band) or Decision 2009/766/EC as amended by Decision 2011/251/EU (for the 900 MHz band and 1800 MHz band), as applicable.

¹³ As with the GSM, UMTS and LTE Terrestrial Systems, coverage will be measured using a device matching the appropriate Users Equipment standard for the system in use.

(ii) Such measurement standards shall be defined on whatever basis appears appropriate to the Commission having regard to, amongst other things, international standards and recommendations, but for indicative purposes these standards are likely to be based on:

- For measurement purposes — an average pilot signal field strength of “X”¹⁴ measured outdoors at a height of 1.5m, or a Carrier to Interference (C/I) ratio of —Y dB¹⁵
- For propagation prediction systems — a pilot signal field strength of “X” over 95% of the area during 95% of the time.

(c) Coverage from terrestrial systems in “other designated frequency bands”

In this paragraph, ‘other designated frequency bands’ means the 2100 MHz band, which is to say, the 1900 to 1980 MHz band and the 2110 to 2170 MHz band.

(i) Where the Licensee has deployed one or more than one terrestrial system in other designated frequency bands on foot of a licence or licences granted under section 5 of the Act of 1926, which provides or provide a seamless service with Terrestrial Systems in one or more than one of the 800 MHz, 900 MHz and 1800 MHz bands, up to 35% of the population coverage (that is to say, one-half) of the 70% of the population coverage obligation set out in Section 3(1) above may be met using coverage provided by the terrestrial systems in these other designated frequency bands.

(3) Reporting of Compliance

- (a) Every twelve months, the Licensee shall measure and submit an annual compliance report to the Commission on coverage.
- (b) The measurements required for this compliance report shall be agreed with the Commission in advance and the compliance report shall have sufficient detail and granularity to allow the Commission to verify the Licensee’s measurements.
- (c) Where the Licensee is claiming to have met the minimum coverage and roll-out obligation set out in Section 3(1) above for the first time, the compliance report shall contain drive test measurements¹⁶. These drive test measurements are to be carried out at the Licensee’s own expense and to a standard as agreed with the Commission.

¹⁴ Corrected for the bandwidth used but based on a harmonised European or International standard which would be confirmed following consultation with stakeholders.

¹⁵ This would be the C/I ratio giving a quasi error free channel, following a standards based approach.

¹⁶ Drive Test Measurements are measurements collected using a motor vehicle.

- (d) Upon request by the Commission¹⁷, the Licensee shall carry out drive test measurements and submit these results to the Commission. These drive test measurements are to be carried out at the Licensee’s own expense and to a standard as agreed with the Commission.
- (e) The Licensee shall submit this compliance report each calendar year within 31 days of the anniversary of the Licence Commencement Date of the Liberalised Use Licence.
- (f) In the compliance report the Licensee shall notify the Commission whether it has either (a) met the relevant coverage and roll-out obligation specified in relation to the Licensee in Section 3 (1) above, or (b) failed to meet the said obligation and reasons for same.
- (g) Failure by the Licensee to so notify the Commission shall be deemed to comprise non-compliance with both this reporting obligation and the relevant coverage and roll-out obligation.

4: Quality of Service (QoS) Obligations

(1) The Minimum “Availability of the Network” Standard

“Network unavailability” means the average number of minutes per terminal per six month period for which services on the network are not available due to a network disturbance, failure or scheduled unavailability.

“The network” means any Terrestrial System which uses the Licensed Spectrum Blocks.

- (a) The “availability of the network” shall be measured in terms of “network unavailability” and reported on an annual basis.
- (b) The Licensee shall ensure that network unavailability is less than 35 minutes (based on the weighting factors set out in Table 6 below) per six month period.

Table 6: Weighting Factors for Network Unavailability tracking all periods of network unavailability.

Network Unavailability, Weighting Factors (divide duration of each network event by weighting factor)			
	Monday to Friday	Saturday	Sunday
For periods between 07.00 and 24.00	1	2	4
For periods between 00.00 and 07.00	4	8	16

¹⁷ The Commission does not envisage drive test measurements being required on a frequent basis, but notes that such measurements may be appropriate in circumstances where:

- a Licence is submitting a compliance report on coverage for the first time;
- the Commission’s own verification checks, drive test measurements or other information suggests that there may be discrepancies in the compliance report on coverage or the Licensee may not be meeting its coverage obligation.

- (c) The Licensee shall maintain this network log in a manner that will demonstrate to the satisfaction of the Commission that such a network log is an adequate means of assessing whether the Licensee is complying with its “availability of the network” obligation under this Licence.
- (d) The network log, or as may be appropriate, part thereof, shall be made available on request to the Commission.
- (e) The Licensee shall calculate the network unavailability for any period specified by the Commission from the information recorded in the network log, and shall, upon request and within such time as may be specified by the Commission, provide the Commission with the results of the calculation

(2) The Minimum “Voice Call” Standard

In this paragraph “voice calls” does not include Voice over Internet Protocol (VoIP) calls.

- (a) Where the Licensee and/or any third party via contractual or other arrangements with the Licensee, provides a “voice call” service on a Terrestrial System which uses the Licensed Spectrum Blocks, the Licensee shall comply with the minimum “voice call” standard as set out in Table 7 below.

Table 7: The minimum “voice call” standard for each 6 month period for annual reporting

	Average	Worst Case
Maximum Permissible Blocking Rates This refers to the maximum percentage of total call attempts which are unsuccessful during the time consistent busy hour ¹⁸ .	2%	4%
Maximum Permissible Dropped Call Rates This refers to the maximum percentage of total originating calls which are prematurely released by the network within 3 minutes of the call being made.	2%	4%
Transmission quality The Licensee shall ensure that the speech transmission quality is as good as or better than the speech quality associated with the GSM Standard and GSM Technical Specifications of the European Telecommunications Standards Institute (“ETSI”). The Licensee shall ensure that appropriate echo treatment equipment is used and that it is properly configured.		

- (b) Where a “voice call” service is provided by the Licensee and any third party via contractual or other arrangements with the Licensee, the minimum voice call standard shall be calculated by combining the “voice call” measurements of the Licensee with that of the third party.

¹⁸ “Time consistent busy hour” means the period of one-hour starting at the same time each day for which the average traffic of the network concerned is greatest over the days under consideration. The time consistent busy hour shall be determined from an analysis of traffic data obtained from the service and be subject to the Commission’s approval. The ‘Time consistent busy hour’ is determined from the operator’s voice traffic. It is the one-hour period during which there is the highest level of traffic. The blocked call rates are measured for the same one-hour period during each review period (i.e. 6 months). The one-hour period is determined by the operator and is subject to the Commission’s approval.

(3) Reporting of Compliance

- (a) Every twelve months, the Licensee shall measure, and submit an annual compliance report to the Commission on (a) the availability of the network QoS standard and (b) the voice call QoS standard.
- (b) The measurements required for this compliance report shall be agreed with the Commission in advance and the compliance report shall have sufficient detail and granularity to allow the Commission to verify the Licensee's measurements.
- (c) Upon request by the Commission¹⁹ the Licensee shall carry out drive test measurements²⁰ and submit these results to the Commission. These drive test measurements are to be carried out at the Licensee's own expense and to a standard as agreed with the Commission.
- (d) The Licensee shall submit this compliance report each calendar year within 31 days of the anniversary of the Licence Commencement Date of the Liberalised Use Licence.
- (e) In the compliance report the Licensee shall notify the Commission whether the Licensee has either (a) met the relevant QoS obligations as set out in Section 4 (1) and Section 4 (2) above, or (b) failed to meet the said obligations and reasons for same.
- (f) Failure by the Licensee to so notify the Commission shall be deemed to comprise non-compliance with both this reporting obligation and the relevant Quality of Service obligations.

¹⁹ The Commission does not envisage drive test measurements being required on a frequent basis, but notes that such measurements may be appropriate in circumstances where:

- a Licence is submitting a compliance report on QoS for the first time;
- the Commission's own verification checks, drive test measurements or other information suggests that there may be discrepancies in the compliance report on QoS or the Licensee may not be meeting its QoS obligations.

²⁰ Drive Test Measurements are measurements collected using a motor vehicle.

SCHEDULE 2

WIRELESS TELEGRAPHY ACT, 1926**WIRELESS TELEGRAPHY (LIBERALISED AND PREPARATORY
LICENCES IN THE 800 MHz, 900 MHz AND 1800 MHz BANDS)
REGULATIONS 2012****Preparatory Licence for terrestrial systems capable of providing Electronic
Communications Services.**

Preparatory Licence under section 5 of the Wireless Telegraphy Act, 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 (as substituted by section 182 of the Broadcasting Act 2009 (No. 18 of 2009)) of the Wireless Telegraphy Act, 1926 (No. 45 of 1926), hereby grants to the Licensee specified _____ of _____:

Authorisation to keep and have possession of apparatus for wireless telegraphy for terrestrial systems capable of providing Electronic Communications Services as specified in Part 2 to this Licence, subject to such apparatus being installed and maintained in accordance with the terms and conditions and restrictions set out in the Wireless Telegraphy (Liberalised and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz bands) Regulations, 2012 (S.I. No. 251 of 2012) (“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, under which this Licence is issued, and within Parts 1 to 2 of this Licence; and
- (2) The Licensee shall ensure that it makes payment of all fees as detailed in the Regulations under which this Licence is issued.

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

Signed: _____

For and on behalf of the Commission for Communications Regulation

Date of Issue: _____

Official Stamp

Part 1**Licence Conditions**

- (1) The Licensee may keep, have possession of, install and maintain the Apparatus detailed in Part 2 of this Licence.
- (2) The Licensee shall not work or use the Apparatus detailed in Part 2 of this Licence.

Part 2**Statement of Authorised Apparatus****To Include:**

Authorised Band	Commencement Date of Lot	Expiry Date of Lot	Description of Apparatus
<i>800, 900 or 1800MHz as appropriate</i>	<i>DD Month YYYY</i>	<i>DD Month YYYY</i>	

SCHEDULE 3

**RESERVE PRICE PER SPECTRUM BLOCK, PER SPECTRUM BAND
AND PER TIME SLICE**

Spectrum Band	Reserve Price per Spectrum Block in Time Slice 1	Reserve Price per Spectrum Block in Time Slice 2
800 MHz band	€2.55 million	€8.26 million
900 MHz band	€2.55 million	€8.26 million
1800 MHz band	€1.27 million	€4.13 million



GIVEN under the official seal of the Commission for Communications Regulation this 13 July 2012.

KEVIN O BRIEN,
Commissioner, for on Behalf of the Commission of Communications Regulation.
For and on behalf of the Commission of Communications Regulation.

The Minister for Communications, Energy and Natural Resources consents to the making of the foregoing Regulations.



GIVEN under the Official Seal of the Minister for Communications, Energy and Natural Resources this 12 July 2012.

PAT RABBITTE,
Minister for Communications, Energy and Natural Resources.

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 licences for apparatus for Wireless Telegraphy for terrestrial systems capable of providing Electronic Communications Services in some or all of the 800 MHz, the 900 MHz and the 1800 MHz bands.

BAILE ÁTHA CLIATH
ARNA FHOILSIÚ AG OIFIG AN tSOLÁTHAIR
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OIFIG DHÍOLTA FOILSEACHÁN RIALTAIS,
TEACH SUN ALLIANCE, SRÁID THEACH LAIGHEAN, BAILE ÁTHA CLIATH 2,
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