

CONSULTATION DOCUMENT

Updating the spectrum management frameworks for the 900 MHz, 1800 MHz and 2.5 GHz bands designated for terrestrial systems capable of providing electronic communications services

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TABLE OF CONTENTS

1	Introduction	1
2	European Union legal frameworks	4
2.1	The 900 MHz and 1800 MHz frequency bands	4
2.2	The European Electronic Communications Code.....	7
3	Discrepancies between national law and the 2017 MCA Decision.....	9
4	Proposed amendments to national licensing frameworks and to individual grants of rights of use of radio spectrum in the 900 MHz and 1800 MHz bands	13
4.1	Facilitating the provision of innovative wireless technologies in the 900 MHz and 1800 MHz bands.....	14
4.2	Addressing the divergences of the 2017 MCA Decision and enhancing the spectrum efficiency measures.....	15
4.3	Updating the 2010 MCA Decision	22
4.4	Establishing the in-block power limits.....	23
4.5	Frequency separation requirements.....	25
5	Consultation framework.....	27

List of Abbreviations

Term	Definition
2010 MCA Decision	Decision no. MCA/10/44/D
2017 MCA Decision	Decision no. MCA/D/17-2971
2022 EU Decision	Commission Implementing Decision (EU) 2022/173
AAS	Active Antenna System
BEM	Block Edge Mask
CEPT	European Conference of Postal and Telecommunications Administrations
ECC	Electronic Communications Committee
EC-GSM-IoT)	Extended Coverage GSM IoT
ECNSR	Electronic Communications Networks and Services (General) Regulations (S.L.399.48)
ECRA	Electronic Communications (Regulation) Act (Cap. 399)
ECS	Electronic Communications Services
EECC	European Electronic Communications Code
ETSI	European Telecommunications Standards Institute
EU	European Union
FDD	Frequency Division Duplex
GSM	Global System for Mobile communications
IoT	Internet-of-Things
LTE	Long Term Evolution
LTE-eMTC	LTE evolved Machine Type Communications
LTE-MTC	LTE Machine Type Communications
MCA	Malta Communications Authority
MFCN	Mobile-Fixed Communications Network
NB-IoT	Narrowband IoT
RSPG	Radio Spectrum Policy Group
TDD	Time Division Duplex
TRP	Total Radiated Power
UMTS	Universal Mobile Telecommunications System
WiMAX	Worldwide Interoperability for Microwave Access

1 Introduction

In July 2010, the Malta Communications Authority ('hereafter the 'MCA') published Decision no. MCA/10/44/D¹ (hereafter '2010 MCA Decision') which established the methodology for the assignment and the management of radio spectrum in the 900 MHz (880-915 MHz / 925-960 MHz) and the 1800 MHz (1710-1785 MHz / 1805-1880 MHz) bands. This Decision has amongst others determined the conditions to be attached to grants of rights of use of radio spectrum in these bands. From a spectrum management perspective, the conditions were aligned with those set out in Commission Decision 2009/766/EC².

On the basis of the 2010 MCA Decision, following an open call for applications, the MCA issued grants of rights of use of radio spectrum through a direct spectrum assignment procedure in 2011. Whilst the entire 900 MHz band was assigned, a number of channels within the 1800 MHz band were and remain unassigned due to a lack of market interest. Information on the state-of-play of these bands is provided at Annex 1.

In July 2014 the MCA published Decision no. MCA/D/14-1933³ on the assignment process of radio spectrum in the 800 MHz (790-862 MHz), the 2.5 GHz (2500-2690 MHz) and the unassigned spectrum in the 1800 MHz band. In October 2017, the decision was substituted with Decision no. MCA/D/17-2971⁴ (hereafter '2017 MCA Decision') mainly for the purpose of varying certain regulatory and operational aspects in relation to the use of the 800 MHz band. In September 2018, a corrigendum to the 2017 MCA Decision was published to correct the reference of the applicable European Union law for the 1800 MHz band.

¹ <https://www.mca.org.mt/consultations-decisions/mca-decision-future-900-mhz-and-1800-mhz-bands>.

² 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. This Decision has been amended by Commission Decisions 2011/251/EU and (EU) 2018/637.

³ <https://mca.org.mt/sites/default/files/superseded-MCA-Decision-14-1933.pdf#overlay-context=consultations-decisions/mca-decision-assignment-process-additional-spectrum-wireless-broadband>.

⁴ https://mca.org.mt/sites/default/files/MCA-D-17-2971_Amended%20MCA%20Decision%20_14-1933_0.pdf#overlay-context=consultations-decisions/mca-decision-assignment-process-additional-spectrum-wireless-broadband.

As regards European Union legislation concerning the use of the 900 MHz and 1800 MHz bands, Council Directive 87/372/EEC⁵ (the ‘GSM Directive’), Commission Decision 2009/766/EC⁶ and Commission Implementing Decision (EU) 2022/173⁷ (hereafter ‘2022 EU Decision’) are of relevance. The GSM Directive, as amended made available the 900 MHz for GSM and UMTS systems, as well as for other terrestrial systems capable of providing electronic communications services that can coexist with GSM. These other systems are described in Commission Decision 2009/766/EC, as amended twice to include LTE, WiMAX and the Internet-of-Things (‘IoT’).

In line with the European 5G Action Plan⁸ and Opinions of the Radio Spectrum Policy Group⁹, in 2018, the European Commission granted a mandate to the European Conference of Postal and Telecommunications Administrations (‘CEPT’) to develop harmonised least restrictive technical conditions for a number of frequency bands, including the 900 MHz and 1800 MHz, suitable for next generation (5G) terrestrial wireless systems. In response to that mandate the CEPT adopted CEPT Reports 72¹⁰ and 80¹¹, which proposed a harmonised band plan and a set of harmonised technical conditions suitable for the introduction of next generation (5G) terrestrial wireless systems. On the basis of these Reports, the 2022 EU Decision was adopted, and Commission Decision 2009/766/EC repealed. The 2022 EU Decision needs to be implemented by Malta by 6 August 2024. Nonetheless, until this decision is implemented the harmonised framework of Commission Decision 2009/766/EC shall continue to apply.

⁵ Council Directive 87/372/EEC of 25 June 1987 on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community. This Directive has been amended by Directive 2009/114/EC of the European Parliament and of the Council.

⁶ 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.

⁷ 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.

⁸ <https://digital-strategy.ec.europa.eu/en/policies/5g-action-plan>.

⁹ Documents RSPG16-032 (9 November 2016) and RSPG18-005 (30 January 2018).

¹⁰ CEPT Report 72 (Report A) - Review of technical conditions in the paired terrestrial 2 GHz and the 2.6 GHz frequency bands, and the usage feasibility of the 900 MHz and 1800 MHz frequency bands.

¹¹ CEPT Report 80 (Report B) - Channelling arrangements and least restrictive technical conditions suitable for ECS including 5G terrestrial wireless systems in the 900 MHz and 1800 MHz frequency bands, in compliance with the principles of technology and service neutrality.

In the interim timeframe, Directive (EU) 2018/1972¹² was adopted and subsequently transposed under national legislation. These legal instruments include provisions which have a direct effect on the conditions to be attached to grants of rights of use in the 900 MHz and 1800 MHz frequency bands. Some of these provisions, such as the duration of individual grants of rights of use differ from those currently established in the 2010 MCA Decision and the 2017 MCA Decision. Given that vacant radio spectrum is currently available in the 1800 MHz band, it is desirable to align such provisions with those established at law as a measure to provide legal clarity and ensure that the framework is interpreted correctly.

It is desirable to implement the 2022 EU Decision in short order in order to assist undertakings in the provision of innovative next generation wireless services to citizens and at the same time facilitate the process towards the digital transformation of Malta. In this regard the MCA would like to seek the views of the relevant stakeholders on proposed amendments to the applicable frameworks and subsequently to the grants of rights of use of radio spectrum in the 900 MHz and 1800 MHz bands.

The MCA would like to underline that nothing stated in this consultation document shall be construed to extend the validity of existing grants of rights of use of radio spectrum in the 900 MHz and 1800 MHz bands.

In this regard, in accordance with its obligations under Article 4A of the Malta Communications Authority Act (Chapter 418 of the Laws of Malta), the MCA welcomes written comments and representations from interested parties during the consultation period. Responses received will assist the MCA in determining the best approach to be adopted in the circumstances and whether it will be opportune to issue amended grants of rights of use in the 900 MHz and 1800 MHz frequency bands.

¹² Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code.

2 European Union legal frameworks

2.1 The 900 MHz and 1800 MHz frequency bands

Council Directive 87/372/EEC recognised the need to establish a pan-European mobile communications system based on the GSM standard within the 900 MHz frequency band. It has therefore mandated European Member States to make available the band for a pan-European digital public cellular radio service.

Over time it was considered necessary to increase flexibility in spectrum management and access to radio spectrum in order to contribute to the objectives of the internal market in electronic communications. As a result, the GSM Directive was amended and the 900 MHz band was also made available for UMTS and other pan-European systems that can coexist with GSM. These other systems were included in a new radio spectrum harmonisation decision, i.e. Commission Decision 2009/766/EC. This Commission Decision, as amended, determined which other radio-based technologies can be provided in the 900 MHz and 1800 MHz bands in addition to GSM, namely, LTE, WiMAX and IoTs. The IoT technologies are LTE Machine Type Communications (LTE-MTC), LTE evolved Machine Type Communications (LTE-eMTC) and Narrowband IoT (NB-IoT). Extended Coverage GSM IoT (EC-GSM-IoT) is an integral part of the GSM system under the GSM Directive.

As a measure to facilitate the proliferation of next generation (5G) systems in line with the EU 5G Action Plan and RSPG Opinions, in 2018 the Commission tasked CEPT to review the harmonised technical conditions for certain EU-harmonised frequency bands, including the 900 MHz and 1800 MHz, and to develop least restrictive harmonised technical conditions suitable for next-generation (5G) terrestrial wireless systems. In response to this task, the CEPT adopted its CEPT Report 72 (Report A) which concluded that within the 900 MHz frequency band, GSM and narrowband terrestrial systems including cellular IoT systems will continue to be in commercial operation for the foreseeable future. This Report stipulates a need for a frequency separation of 200 kHz, when GSM and narrowband terrestrial systems, including cellular IoT systems, are in operation in the 900 MHz and 1800 MHz frequency bands. Furthermore, this Report also provides information on the feasibility of using the 900 MHz and 1800 MHz frequency bands for 5G, including any limitations of the GSM Directive for the 900 MHz band.

In 2021 the CEPT adopted another report for the European Commission, Report 80 (Report B), which proposed a harmonised band plan and the least restrictive harmonised technical conditions for the coexistence of narrowband and broadband terrestrial systems capable of providing electronic communications services using the 900 MHz and 1800 MHz frequency bands, based on the concept of a block edge mask ('BEM'). It was noted that these conditions are essential for ensuring technology neutrality in these bands.

The BEMs cover narrowband terrestrial systems with a channel bandwidth of 200 kHz, excluding however GSM and EC-GSM-IoT. They also cover broadband terrestrial systems with a channel bandwidth larger than 200 kHz. The differentiation between narrowband and broadband terrestrial systems was deemed necessary for the implementation of a frequency separation in certain scenarios at national level. In this regard, CEPT Report 80 sets out a frequency separation requirement between the nominal channel edges of adjacent narrowband and broadband terrestrial systems capable of providing electronic communications services as well as between the nominal channel edges of different adjacent narrowband terrestrial systems capable of providing electronic communications services and also GSM and EC-GSM-IoT. This Report considered that the implementation of frequency separation should be managed at the national level.

In the interim, in 2019, the European Commission commissioned a study¹³ to evaluate whether it is still useful to maintain the protection for GSM services from interference from any new technology which may be introduced into the 900 MHz band, as guaranteed by the GSM Directive. This study amongst others concluded that there may be a need to preserve the continuity of GSM technology and to retain the GSM Directive in force.

On the basis of the studies referred to above, in particular those of CEPT, a new set of EU harmonised technical parameters for the 900 MHz and 1800 MHz frequency bands were established and published in the 2022 EU Decision. This requires designating and making available both bands for systems capable of providing electronic communications services that can coexist with GSM, by the 6th August 2024. The key parameters of these other systems are listed in Table 1 below.

Parameter	900 MHz band	1800 MHz band
Mode of operation	Frequency Division Duplex ('FDD') The lower band or portions thereof may be used for uplink-only operation. The upper band or portions thereof may be used for downlink only operation.	
Assignable frequency block size	5 MHz but smaller sizes are permissible in multiples of 200 kHz.	

¹³ SMART 2019/0006 - <https://digital-strategy.ec.europa.eu/en/library/study-current-and-prospective-use-900-mhz-band-gsm-technology-reference-considering-present-and>.

Parameter	900 MHz band	1800 MHz band
Frequency separation ¹⁴	200 kHz between the nominal channel edges of adjacent systems complying with the BEM, for: <ul style="list-style-type: none"> - a narrowband system and a broadband system - two different types of narrowband systems - a GSM system and either a narrowband or a broadband system Narrowband systems operating in the guard-band mode of a relevant broadband system, a separation of 200 kHz or more shall be applied between the channel edge of that narrowband system and the edge of the edge of the operating band.	
Active Antenna System ('AAS')	Not allowed	Allowed
In-block power limit	For Non-AAS, an EIRP limit may be set between 63 dBm/(5 MHz) and 67 dBm/(5 MHz) per antenna for a broadband system, and a value between 60 dBm/(200 kHz) and 69 dBm/(200 kHz) per antenna for a narrowband system. For AAS (1800 MHz only), an upper limit of 58 dBm/(5 MHz) per cell may be applied.	
Baseline power limit for the FDD downlink block	For Non-AAS, 3 dBm/MHz maximum mean EIRP per antenna. For AAS (1800 MHz only), -6 dBm/MHz maximum mean Total Radiated Power ('TRP') limit per cell.	
Transitional region power limit	A set of limits are established.	
Additional baseline power limit for non-AAS base stations	n/a	A set of limits are established

Table 1 - Key technical parameters as per Commission Implementing Decision (EU) 2022/173

It is imperative to note that the BEM does not apply to GSM and EC-GSM-IoT systems. The associated technical parameters for these systems remain those referred to in the applicable standards published by the European Telecommunications Standards Institute ('ETSI'). Nonetheless, the BEM cover other narrowband systems with a channel bandwidth of 200 kHz.

¹⁴ CEPT Report 80 contains a toolbox for implementing a frequency separation between different terrestrial systems capable of providing electronic communications services.

It should also be noted that Commission Implementing Decision (EU) 2022/173 has repealed Commission Decision 2009/766/EC. Nonetheless, until the 2022 Decision is implemented by the 6th August 2024 at the latest, the harmonised framework provided for in Commission Decision 2009/766/EC shall continue to be applied.

2.2 The European Electronic Communications Code

Directive (EU) 2018/1972 establishing the European Electronic Communications Code (hereafter the 'EECC') updated the rules for radio spectrum management across the European Union. Amongst other things, the EECC seeks to ensure better coordination of spectrum policies and assignment conditions across the Union. These rules have been transposed under national legislation under the Electronic Communications (Regulation) Act (Cap. 399) and the Electronic Communications Networks and Services (General) Regulations (S.L.399.48) and came into effect on the 1st October 2021.

Table 2 lists these EECC articles and the instrument used for their transposition under national law.

EECC	National law	Name of EECC article
Article 3	Cap. 399 Article 4	General objectives
Article 4	Cap. 399 Article 4A	Strategic planning and coordination of radio spectrum policy
Article 23	S.L.399.48 regulation 18	Consultation and transparency mechanism
Article 28	S.L.399.48 regulation 19	Radio spectrum coordination among Member States
Article 35	S.L.399.48 regulation 23	Peer review process
Article 42	Cap. 399 Article 31	Fees for rights of use for radio spectrum and rights to install facilities
Article 45	Cap. 399 Article 38	Management of radio spectrum
Article 46	Cap. 399 Article 37	Authorisation of the use of radio spectrum

EECC	National law	Name of EECC article
Article 47	S.L.399.48 regulation 33	Conditions attached to individual rights of use for radio spectrum
Article 48	S.L.399.48 regulation 35	Granting of individual rights of use for radio spectrum
Article 49	S.L.399.48 regulation 36	Duration of rights
Article 50	S.L.399.48 regulation 37	Renewal of individual rights of use for harmonised radio spectrum
Article 51	S.L.399.48 regulation 38	Transfer or lease of individual rights of use for radio spectrum
Article 53	S.L.399.48 regulation 40	Coordinated timing of assignments
Article 54	S.L.399.48 regulation 41	Coordinated timing of assignments for specific 5G bands
Article 55	S.L.399.48 regulation 42	Procedure for limiting the number of rights of use to be granted for radio spectrum
Article 56	S.L.399.48 regulation 43	Access to radio local area networks
Article 57	S.L.399.48 regulation 44	Deployment and operation of small-area wireless access points

Table 2 - National and EU provisions concerning spectrum management

3 Discrepancies between national law and the 2017 MCA Decision

The 2017 MCA Decision reflects the national legal framework which was in force prior to the 1st October 2021 and that of the EU pursuant to the Authorisation¹⁵ and Framework¹⁶ Directives.

Some of the provisions of the decision are not in line with those established in national law (refer to section 2.2), as described in the table below.

2017 MCA Decision		National law ¹⁷		Divergence
No.	Description	No.	Description	
5.1	The annual spectrum fees are established by Government in due course but before the launch of the assignment process. It is expected that these fees will be established through an amendment of the Eighth Schedule of the Electronic Communications Networks and Services (General) Regulations (S.L. 399.28 of the Laws of Malta).	ECN SR, 12 th Schedule	Radio spectrum fees are included under the 12 th Schedule of S.L.399.48.	SL399.28 has been revoked and replaced by SL399.48. The radio spectrum fees are now included in the 12 th Schedule of SL399.48.

¹⁵ Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services.

¹⁶ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services.

¹⁷ The Electronic Communications (Regulation) Act (Cap. 399) is referred to as 'ECRA' and the Electronic Communications Networks and Services (General) Regulations (S.L.399.48) is referred to as 'ECNSR'.

2017 MCA Decision		National law ¹⁷		Divergence
No.	Description	No.	Description	
5.2	The rights of use of spectrum will be granted for a term of fifteen (15) years.	ECN SR, regulation 36(2)	<p>The duration of rights of use shall ensure regulatory predictability for the holders of the rights over a period of at least twenty years.</p> <p>It shall be ensured that rights are valid for a duration of at least 15 years and include, where necessary, an adequate extension thereof.</p>	The Decision establishes a licence term of 15 years whilst the regulations require to provide regulatory predictability over a 20-year period.
n/a	-	ECN SR, regulation 37(1)	<p>The Authority shall take a decision on the renewal of individual rights of use for harmonised radio spectrum in a timely manner before the duration of those rights expires, except where, at the time of assignment, the possibility of renewal has been explicitly excluded:</p> <p>Provided that for such a purpose, the Authority shall assess the need for such renewal of its own initiative or upon request by the holder of the right, in the latter case not earlier than five years prior</p>	The Regulations require to decide on whether spectrum licences shall be renewed or otherwise in a timely manner. This provision is not included in the MCA Decision.

2017 MCA Decision		National law ¹⁷		Divergence
No.	Description	No.	Description	
			to expiry of the duration of the rights concerned. This shall be without prejudice to renewal clauses applicable to existing rights.	
5.3	<p>In line with the principles established in the EU Framework Directive (2002/21/EC as amended by 2009/140/EC) the spectrum will be assigned on a technology neutral basis. Therefore licensees will be free to deploy any technology as long as they comply with the relevant EU spectrum harmonisation decisions namely, 2010/267/EU for the 800 MHz band, 2011/251/EU 2009/766/EC for the 1800 MHz band and 2008/477/EC for the 2.5 GHz band.</p> <p>The Authority retains its right to amend the assignments made, and any of the terms and conditions of the licence to reflect legal changes that are imposed upon it, EU harmonisation</p>	-	<p>The EU Framework Directive (2002/21/EC) was repealed pursuant to Article 125 of the EECC. The effective date of the revocation was 21 December 2020.</p>	<p>An update to the reference to EU legislation, including the radio spectrum harmonisation decisions is required.</p>

2017 MCA Decision		National law ¹⁷		Divergence
No.	Description	No.	Description	
	requirements and to cater for other needs that the local market may have throughout the term of the licence, taking due account of its obligations at law.			
5.4	In line with the principles established in the EU Framework Directive (2002/21/EC as amended by Decision 2009/140/EC), no limitations with respect to the services that may be offered over the spectrum acquired in this process will be imposed. However, in conformity with its powers at law, the Authority reserves the right to impose certain service obligations.	-	The EU Framework Directive (2002/21/EC) was repealed pursuant to Article 125 of the EECC. The effective date of the revocation was 21 December 2020.	An update to the reference to EU legislation is required.

Table 3 - Divergences between national law and the Decision No. MCA/D/17-2971

4 Proposed amendments to national licensing frameworks and to individual grants of rights of use of radio spectrum in the 900 MHz and 1800 MHz bands

As stated earlier in the document, some undertakings expressed interest to use their assigned radio spectrum in the 1800 MHz band for terrestrial wireless systems in addition to those stated in Commission Decision 2009/766/EC.

In this regard reference is made to Article 6(3) of Decision No. 243/2012/EU¹⁸ which requires Member States to help providers of electronic communications to regularly upgrade their networks to the latest, most efficient technology, in order to create their own spectrum dividends in line with the principles of service and technological neutrality.

In consideration of the above, the MCA is proposing amending the 2010 MCA Decision and the 2017 MCA Decision and to subsequently update the technical conditions attached to the individual grants of rights of use of radio spectrum in the 900 MHz and 1800 MHz bands to align them with those established in the 2022 EU Decision. This process will also serve to address the divergences of the 2017 MCA Decision with the national legal frameworks currently in force as well as to enhance the radio spectrum efficiency measures set out in this MCA decision. This is necessary in order to give regulatory certainty on how vacant radio spectrum in the frequency bands subject to the decision will be regulated.

The MCA would like to reiterate that through this process it is not seeking to extend the validity of the individual grants of the rights of use currently in force in the 900 MHz and 1800 MHz bands or to modify any of the conditions of such grants other than those of a technical nature. In 2024 the MCA plans to consult further, on the setting up of a new framework on the methodology for the assignment and the management of radio spectrum in the 900 MHz and 1800 MHz bands. This consultation procedure may encompass other frequency bands, such as the terrestrial paired 2 GHz band, which is also designated for the same type of electronic communications services.

¹⁸ Decision No. 243/2012/EU of the European Parliament and of the Council of 14 March 2012 establishing a multiannual radio spectrum policy programme.

4.1 Facilitating the provision of innovative wireless technologies in the 900 MHz and 1800 MHz bands

The conditions attached to grants of rights of use in the 900 MHz and 1800 MHz bands reflect the requirements set out in the GSM Directive as well as in Commission Decision 2009/766/EC. Undertakings are therefore permitted to deploy any or all of the terrestrial wireless systems listed in Annex I (B) of their grants of rights of use¹⁹. These systems refer to GSM, UMTS, LTE, WiMAX and various IoT technologies.

In this regard the MCA is proposing to modify existing rights of use of radio spectrum in these bands by replacing the current Annex I (B) with a simple reference to the 2022 EU Decision but including any specific conditions which apply to the national context (see paragraphs 4.4 and 4.5 below). Nonetheless, the reference to the ETSI standard for GSM and EC-GSM-IoT will be retained.

It should be underlined that the adoption of the proposed amendments to the grants of rights of use as aforesaid would also necessitate modifications to the national spectrum management frameworks governing the licensing and use of the 900 MHz and 1800 MHz bands. Such amendments are described in detail in paragraphs 4.2 and 4.3 of this consultation.

The following provides the proposed text to replace Section B under Annex I of the individual grants of rights of use in the 900 MHz and 1800 MHz bands.

“

B. List of Terrestrial Systems that can operate in the Radio Frequency Spectrum:

- a) GSM system as specified by ETSI standards, in particular EN 301 502, EN 301 511 and EN 301 908-18, also including Extended Coverage GSM IoT (EC-GSM-IoT).
- b) Terrestrial systems capable of providing electronic communications services, in compliance with the parameters set out in Commission Implementing Decision (EU) 2022/173, unless otherwise specified in Decision No. MCA/D/17-2971 or this License.

“

¹⁹ Individual grants of rights of use of radio spectrum are published on MCA's website at https://www.mca.org.mt/regulatory/authorizations_licensing/spectrum-licensing.

Question 1 : *Do you agree with MCA's approach as regards the modifications to existing grants of rights of use of radio spectrum in the 900 MHz and 1800 MHz bands as proposed above?*

Please provide justifications in case of disagreement.

4.2 Addressing the divergences of the 2017 MCA Decision and enhancing the spectrum efficiency measures

As a measure to provide regulatory certainty and to ensure that the framework regulating that radio spectrum which is still available for assignment (i.e. vacant spectrum) is aligned with the legal framework currently in force, it is considered necessary to amend the 2017 MCA Decision without delay.

Through this consultation, the MCA is also taking the opportunity to include a new provision under the same MCA decision, aimed to safeguarding the efficient use of the portions of the radio spectrum within the 2500-2690 MHz range, for the deployment of Time Division Duplex ('TDD') networks. This proposal is in line with Commission Implementing Decision (EU) 2020/636 amending Commission Decision 2008/477/EC²⁰ and is similar to the approach already adopted by the MCA as regards the deployment of TDD networks in other frequency bands²¹.

The amendments being proposed (in red) by the MCA are being made available in the table below.

²⁰ Commission Implementing Decision (EU) 2020/636 of 8 May 2020 amending Decision 2008/477/EC as regards an update of relevant technical conditions applicable to the 2 500-2 690 MHz frequency band.

²¹ Refer to Section 4.14 of MCA Decision No. MCA/D/21-4177 on the assignment process for additional spectrum for wireless broadband electronic communications services in the 700 MHz, 3.6 GHz and 26 GHz bands.

2017 MCA Decision		National law ²²		Proposed amendment
No.	Description	No.	Description	
5.1	The annual spectrum fees are established by Government in due course but before the launch of the assignment process. It is expected that these fees will be established through an amendment of the Eighth Schedule of the Electronic Communications Networks and Services (General) Regulations (S.L. 399.28 of the Laws of Malta).	ECN SR, 12 th Schedule	Radio spectrum fees are included under the 12 th Schedule of S.L.399.48.	The annual spectrum fees are established by Government in due course but before the launch of the assignment process. It is expected that these fees will be established through an amendment of the Eighth Twelfth Schedule of the Electronic Communications Networks and Services (General) Regulations (S.L. 399.28 399.48 of the Laws of Malta).
5.2	The rights of use of spectrum will be granted for a term of fifteen (15) years.	ECN SR, regulation 36(2)	The duration of rights of use shall ensure regulatory predictability for the holders of the rights over a period of at least twenty years. It shall be ensured that rights are valid for a duration of at least 15 years and include, where necessary, an adequate extension thereof.	The rights of use of spectrum will be granted for a term of fifteen (15) years ; , with the possibility to extend the licence term for an additional five (5) years and amending the licence terms and conditions of use in an objective and proportionate manner. The proposed mechanism shall be in line with regulation 36 of S.L.399.48. This article shall apply to those grants of rights of use

²² The Electronic Communications (Regulation) Act (Cap. 399) is referred to as 'ECRA' and the Electronic Communications Networks and Services (General) Regulations (S.L.399.48) is referred to as 'ECNSR'.

2017 MCA Decision		National law ²²		Proposed amendment
No.	Description	No.	Description	
				which may be issued after the 30 th September 2021.
n/a	-	ECN SR, regulation 37(1)	<p>The Authority shall take a decision on the renewal of individual rights of use for harmonised radio spectrum in a timely manner before the duration of those rights expires, except where, at the time of assignment, the possibility of renewal has been explicitly excluded:</p> <p>Provided that for such a purpose, the Authority shall assess the need for such renewal of its own initiative or upon request by the holder of the right, in the latter case not earlier than five years prior to expiry of the duration of the rights concerned. This shall be without prejudice to renewal clauses applicable to existing rights.</p>	<p>5.2^{bis} Renewal of License</p> <p>At least two years before the licence expiry date, licensees shall be informed about the intention of the Authority on whether it will renew the respective licences beyond the initial fifteen (15) year period, the conditions for renewing the licence, or the reasons for deciding not to renew the said licence. The renewal of the individual rights of use for the respective radio spectrum shall be in line with the provisions of regulation 37 of S.L.399.48. The Authority may, in order to harmonise the termination dates of the respective spectrum and to establish common expiry date, issue additional extensions thereof on the basis of the prevailing licence conditions. The proposed mechanism is in line with regulation 36(10) of S.L.399.48.</p> <p>This article shall apply to those grants of rights of use which may be issued after the 30th September 2021.</p>

2017 MCA Decision		National law ²²		Proposed amendment
No.	Description	No.	Description	
5.3	<p>In line with the principles established in the EU Framework Directive (2002/21/EC as amended by 2009/140/EC) the spectrum will be assigned on a technology neutral basis. Therefore licensees will be free to deploy any technology as long as they comply with the relevant EU spectrum harmonisation decisions namely, 2010/267/EU for the 800 MHz band, 2011/251/EU 2009/766/EC for the 1800 MHz band and 2008/477/EC for the 2.5 GHz band.</p> <p>The Authority retains its right to amend the assignments made, and any of the terms and conditions of the licence to reflect legal changes that are imposed upon it, EU harmonisation requirements and to cater for other needs that the local market may have throughout the term of the licence,</p>	-	<p>The EU Framework Directive (2002/21/EC) was repealed pursuant to Article 125 of the EECC. The effective date of the revocation was 21 December 2020.</p>	<p>In line with the principles established in Directive (EU) 2018/1972 establishing the European Electronic Communications Code the EU Framework Directive (2002/21/EC as amended by 2009/140/EC) the spectrum will be assigned on a technology neutral basis. Therefore, licensees shall be free to deploy any technology as long as they comply with the relevant EU spectrum harmonisation decisions namely, 2010/267/EU for the 800 MHz band, 2011/251/EU 2009/766/EC 2022/173 for the 1800 MHz band and 2008/477/EC for the 2.5 GHz band.</p> <p>The Authority retains its right to amend the assignments made, and any of the terms and conditions of the licence to reflect legal changes that are imposed upon it, EU harmonisation requirements and to cater for other needs that the local market may have throughout the term of the licence, taking due account of its obligations at law.</p>

2017 MCA Decision		National law ²²		Proposed amendment
No.	Description	No.	Description	
	taking due account of its obligations at law.			
5.4	In line with the principles established in the EU Framework Directive (2002/21/EC as amended by Decision 2009/140/EC), no limitations with respect to the services that may be offered over the spectrum acquired in this process will be imposed. However, in conformity with its powers at law, the Authority reserves the right to impose certain service obligations.	-	The EU Framework Directive (2002/21/EC) was repealed pursuant to Article 125 of the EECC. The effective date of the revocation was 21 December 2020.	In line with the principles established in Directive (EU) 2018/1972 establishing the European Electronic Communications Code the EU Framework Directive (2002/21/EC as amended by 2009/140/EC) , no limitations with respect to the services that may be offered over the spectrum acquired in this process will be imposed. However, in conformity with its powers at law, the Authority reserves the right to impose certain service obligations.
n/a	-	ECN SR, regulation 7(1)	The general authorisation for the provision of electronic communications networks and, or services, and the rights of use for radio spectrum and rights of use for numbering resources may be subject only to the conditions listed in the First Schedule which conditions shall be non-discriminatory,	5.6^{bis} Synchronisation of Time Division Duplex (TDD) networks Pursuant to Decision 2008/477/EC, as amended, part of the 2.5 GHz band is designated for TDD operation. The operation of more than one TDD network in the same geographic area and in the same band, may result in severe interference which may impair the performance of the terrestrial network

2017 MCA Decision		National law ²²		Proposed amendment
No.	Description	No.	Description	
			<p>proportionate and transparent:</p> <p>Provided that in the case of rights of use for radio spectrum, such conditions shall ensure the effective and efficient use thereof and shall be in accordance with regulations 32 and 38, and in the case of rights of use for numbering resources, they shall be in accordance with regulation 81.</p>	<p>capable of providing electronic communications services.</p> <p>To this end, TDD networks shall be set to operate in synchronised operation only. This requires the alignment of all downlink and uplink transmissions for all TDD networks involved as well as synchronising the beginning of the frame across all networks. The requirement for synchronisation is however only applicable for the deployment of outdoor TDD networks and indoor TDD networks intended for mass events. Nonetheless, in the event that harmful interference is present at any indoor site where synchronisation is not deployed, the concerned mobile network operators shall be required to implement measures to mitigate the interference.</p> <p>In consideration of the requirement to use radio spectrum efficiently and the avoidance of harmful interference, the frame structure to be used for synchronised TDD networks in this band shall be in</p>

2017 MCA Decision		National law ²²		Proposed amendment
No.	Description	No.	Description	
				<p>accordance with 'Frame B' of ECC/Rec(20)03²³.</p> <p>It should be underlined that Frame B is deemed to be suitable for the cross-technology synchronised operation of 5G-NR and LTE-TDD networks.</p> <p>Frame B shall therefore be considered as the default synchronisation frame structure for the TDD networks operating in the 2.5 GHz band²⁴.</p> <p>Nonetheless, the MCA will consider the adoption of a frame structure different from the above-mentioned default synchronisation frame, subject to agreement reached between undertakings enjoying the right of use of radio spectrum for the deployment of TDD networks within the first six (6) months from the date of the most recent grant of the rights of use and communicate their decision to the MCA. In this process,</p>

²³ ECC Recommendation (20)03 on frame structures to facilitate cross-border coordination of TDD MFCN in the frequency bands 3400-3800 MHz.

²⁴ CEPT Report 72 concluded that the toolbox developed by CEPT to address the synchronised and unsynchronised operation of TDD networks in the 3400-3800 MHz band could also be reused for the 2.5 GHz band.

2017 MCA Decision		National law ²²		Proposed amendment
No.	Description	No.	Description	
				undertakings shall in particular take into account the reports published by the Electronic Communications Committee (ECC) with numbers 296 ²⁵ and 308 ²⁶ regarding synchronisation ²⁷ .

Table 4 - Proposed amendments to Decision No. MCA/D/17-2971

Question 2 : *Do you have any comments on the proposed synchronisation mechanism for TDD networks operating in the 2.5 GHz band?*

Please suggest an alternative approach in case of disagreement.

4.3 Updating the 2010 MCA Decision

The Decision under reference was adopted in July 2010 and provided the basis for the granting of individual rights of use of radio spectrum in the 900 MHz and 1800 MHz bands in 2011. The relevant provisions of this Decision applicable to the 1800 MHz band were subsequently transferred to the 2017 MCA Decision, as amended.

From a technology perspective, the 2010 MCA Decision takes into account Commission Decision 2009/766/EC. As stated in paragraph 4.1 of this consultation, it is desirable to facilitate the introduction of next generation (5G) wireless systems also in the frequency bands regulated by the MCA decision.

²⁵ ECC Report 296 on National synchronization regulatory framework options in 3400-3800 MHz: a toolbox for coexistence of MFCNs in synchronised, unsynchronised and semi-synchronised operation in 3400-3800 MHz.

²⁶ ECC Report 308 on Analysis of the suitability and update of the regulatory technical conditions for 5G MFCN and AAS operation in the 2500-2690 MHz band.

²⁷ Pursuant to CEPT Report 72, the CEPT toolbox to address the synchronisation operation of TDD networks for the 3400-3800 MHz band can also be reused for the 2.5 GHz band.

For the 900 MHz band this objective can only be realised if the reference to Commission Decision 2009/766/EC is substituted by Commission Implementing Decision (EU) 2022/173 in the 2010 MCA Decision.

Question 3 : *Do you agree with MCA's proposal to amend MCA Decision No. MCA/10/44/D by substituting Commission Decision 2009/766/EC with Commission Implementing Decision (EU) 2022/173?*

Disagreement with this proposal is considered that it is not desirable to make the 900 MHz band also available for next generation (5G) wireless systems before the deadline established in Commission Implementing Decision (EU) 2022/173 (i.e. 6 August 2024). Kindly provide justifications in case of disagreement.

4.4 Establishing the in-block power limits

The Annex of Commission Implementing Decision (EU) 2022/173 establishes the technical parameters for the deployment of terrestrial systems capable of providing electronic communications services in the 900 MHz and 1800 MHz bands. As stated earlier, these parameters are based on a BEM comprising of various elements to ensure coexistence between neighbouring networks and protection of other services and applications in adjacent bands. These BEM parameters do not apply to GSM and EC-GSM-IoT systems.

Table 2 of the EU Decision sets out the in-block power limits for wireless systems operating in both frequency bands. Specifically, this table does not establish a mandatory in-block power level but suggests an upper power limit or a range to be considered for national implementation, as outlined below.

BEM element	Non-AAS EIRP limit	AAS TRP limit (only for the 1800 MHz band)
In-block	<p>Not obligatory.</p> <p>If an upper limit is set by a Member State, a value between 63 dBm/(5 MHz) and 67 dBm/ (5 MHz) per antenna may be applied for a broadband system, and a value between 60 dBm/(200 kHz) and 69 dBm/(200 kHz) per antenna may be applied for a narrowband system.</p>	<p>Not obligatory.</p> <p>If an upper limit is set by a Member State, a value of 58 dBm/(5 MHz) per cell^(*) may be applied.</p>

(*) In a multi-sector base station, the radiated power limit applies to each of the individual sectors.

Table 5 - In-block power limits as per Commission Implementing Decision (EU) 2022/173

The MCA is mindful of the fact that for base stations:

- Commission Decision 2009/766/EC does not establish any in-band power for all the terrestrial electronic communications systems authorised to use the 900 MHz and 1800 MHz bands, other than GSM and EC-GSM-IoT systems;
- similarly, the GSM Directive does not establish any power limits for GSM and EC-GSM-IoT systems;
- the ETSI standards referred to in the GSM Directive and in the Annex to Commission Decision 2009/766/EC do not establish any in-block power limits; and
- the national frameworks for these bands, as set out in MCA Decision Nos. MCA/10/44/D (for the 900 MHz band) and MCA/D/17-2971 (for the 1800 MHz band) reflect the technical requirements of Commission Decision 2009/766/EC and no in-block power limits are determined.

In consideration of the above, the MCA does not wish to add specific technical restrictions that are more restrictive to those currently in force and consequently it does not intend to establish any mandatory in-block power limits for non-AAS base stations operating in the 900 MHz and 1800 MHz frequency bands. This is however subject to the requirement that the relevant obligations in relation to harmful interference (i.e. national and cross-border) as well as EMF will continue to be adhered to.

For AAS base stations in the 1800 MHz band, the MCA considers appropriate to enforce a limit of 58 dBm/(5 MHz) per cell.

Question 4 :	<p><i>Do you agree with MCA’s proposal in relation to the in-block power limits, namely (i) not to establish any in-block power limits for non-AAS base stations, and (ii) to establish a limit of 58 dBm/(5 MHz) per cell for AAS base stations in the 1800 MHz band?</i></p> <p><i>Please provide justifications in case of disagreement and suggest an alternate approach.</i></p>
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4.5 Frequency separation requirements

Ensuring the efficient use of radio spectrum without causing harmful interference is a requirement under national and European regulatory frameworks for electronic communications. The requirement of using the 900 MHz and 1800 MHz bands efficiently is also enshrined in Commission Implementing Decision (EU) 2022/173.

Specifically, the Decision confirms that a frequency separation of 200 kHz between the nominal channel edges of adjacent narrowband and broadband terrestrial systems capable of providing electronic communications services as well as between the nominal channel edges of different adjacent narrowband terrestrial systems capable of providing electronic communications services and also GSM and EC-GSM-IoT is required. Nonetheless, the requirement to implement a frequency separation as aforesaid will not apply in cases where there is agreement between undertakings operating neighbouring systems. In case a frequency separation needs to be applied, the toolbox described under section 3.4.5.3 of CEPT Report 80 may be considered to assist the relevant parties.

The MCA is cognisant of the fact that for the 1800 MHz band, undertakings do not enjoy a right to use a frequency channel that is immediately adjacent to another undertaking. However, for the 900 MHz band, all frequency assignments are adjacent to each other. The MCA is not aware of any cases of harmful interference attributed to the use of frequencies by neighbouring networks. Nonetheless, the MCA would like to ensure that such a situation remains, even when other wireless systems and, or new electronic communications networks are deployed in the bands.

The MCA invites undertakings enjoying grants of rights of use of radio spectrum in the 900 MHz and 1800 MHz bands to reply to the following questions. A joint response would be most welcome. Depending on the responses received, the MCA may include a specific requirement in the MCA Decisions concerning both frequency bands.

Question 5 :	<p><i>Do you have an agreement with another licensed operator in the 900 MHz and/or 1800 MHz bands to ensure coexistence with the respective terrestrial wireless systems? If such an agreement is in place kindly provide any information relevant to the use of adjacent channels or frequency blocks, however so described.</i></p>
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Question 6 :	<p><i>In case an agreement between undertakings is not in place, the MCA proposes to mandate the implementation of frequency separation distances in line with what is stated in Commission Implementing Decision (EU) 2022/173, with a direct reference to the toolbox described in CEPT Report 80. This is unless through this consultation undertakings confirm that they will be committing to finalise a frequency coordination withing 6 months from the publication of the amending MCA Decision/s.</i></p> <p><i>Do you agree with MCA's proposal as outlined above?</i></p> <p><i>Please provide justifications in case of disagreement and suggest an alternate approach.</i></p>
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5 Consultation framework

In accordance with its obligations under Article 4A of the Malta Communications Authority Act (Cap. 418 of the Laws of Malta), the MCA welcomes written comments and representations from stakeholders during the consultation period which shall run from the 13th September 2023 to the 13th October 2023.

For the sake of clarity and ease of understanding, the MCA encourages stakeholders to structure their comments in order and in line with the section numbers and sub-section numbers used throughout this document.

The MCA appreciates that respondents may provide confidential information in their feedback to this consultation document. This information is to be included in a separate annex and should be clearly marked as confidential. Respondents are also requested to state why the information should be treated as confidential.

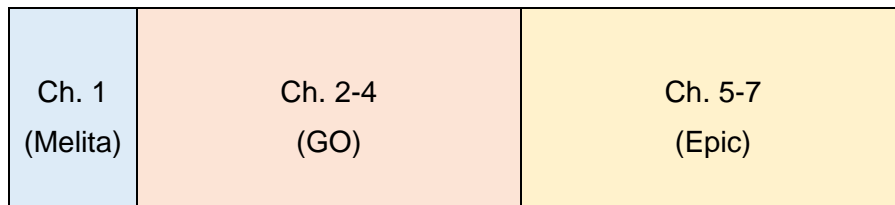
The MCA will take the necessary steps to protect the confidentiality of all such material in accordance with the MCA's confidentiality guidelines and procedures. Respondents are however encouraged to avoid confidential markings wherever possible.

The MCA will, after taking into consideration the responses received to this consultation, publish revised regulatory instruments for the 900 MHz and 1800 MHz bands.

All responses should be submitted electronically to the MCA on consultations@mca.org.mt and addressed to the Chief of Spectrum Management and Technology. The consultation period will run until 12.00hrs. CET of the 13th October 2023.

Extensions to the consultation deadline will only be permitted in exceptional circumstances and only where the MCA deems fit. The MCA reserves the right to grant or refuse any such requests at its discretion. Requests for extensions are to be made in writing within the first ten (10) working days of the consultation period.

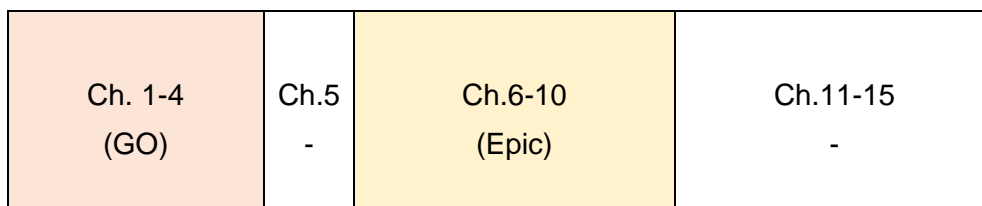
Annex 1 – Current spectrum assignments in the 900 MHz and 1800 MHz bands



880 MHz /
925 MHz

915 MHz /
960 MHz

Figure 1 - Spectrum assignments in the 900 MHz band



1710 MHz /
1805 MHz

1785 MHz /
1880 MHz

Figure 2 - Spectrum assignments in the 1800 MHz band



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