



Pan-Channel Island Consultation on Spectrum Awards in the 3.4 - 3.8 GHz Bands

Consultation Document

Channel Islands Competition and Regulatory Authorities

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1. Introduction

The Guernsey Competition and Regulatory Authority (*GCRA – formerly the Office of Utility Regulation*) has received a request from Y Tel Ltd (*Y Tel*) for an allocation in Guernsey of radio frequency spectrum in the 3.4 GHz band. Before the GCRA can determine whether an allocation is advisable, it wishes to consult parties that may be interested in the use to which the requested and related spectrum may be put. Such consultation, which is the purpose of this document, should in particular identify whether there is more demand for spectrum in the relevant bands than is available and, therefore, the appropriate method of allocating spectrum in this case.

The consultation is undertaken jointly by the GCRA and the Jersey Competition Regulatory Authority (*JCRA*) even if the request that gave rise to this consultation was for spectrum in Guernsey only. The reason for a joint consultation between Jersey and Guernsey is that allocation of spectrum in one island is related to allocation in the other. It is therefore important to consider requirements for spectrum in both islands simultaneously.

The two regulators have broadly similar duties under the Telecommunications (Jersey) Law 2002 and The Regulation of Utilities (Bailiwick of Guernsey) Law, 2001 and, among other objectives, must further the interests of consumers and economic well-being in the Channel Islands. Certain key policy objectives common to both Governments also guide the regulators in determining spectrum allocations in the Channel Islands. For the purposes of this document, the GCRA and the JCRA are together referred to as the Channel Islands Competition and Regulatory Authorities, or **CICRA**, and all references in this document to CICRA should therefore be read as references to each of the GCRA and JCRA, unless the context otherwise requires.

This consultation is taking place within the framework of a broad review of spectrum use that is currently being conducted by the States of Guernsey and States of Jersey. Both States are content that this consultation – on a specific band of spectrum – is consistent with their review and support CICRA engaging in it.

Disclaimer

This document does not constitute legal, technical or commercial advice; CICRA is not bound by this document and may amend it from time to time. This document is without prejudice to the legal position or the rights and duties of CICRA to exercise regulatory powers generally.

2. Structure of the Consultation

The consultation document is structured as follows:

Section 3:	This section outlines the legal bases for the GCRA's and the JCRA's roles and, therefore, for CICRA's role in the allocation of spectrum for telecoms purposes as well as the role of UK legislation in this area.
Section 4:	Proposes a set of objectives that might guide the process of determining how to respond to Y Tel's request.
Section 5:	Discusses spectrum availability in Guernsey and Jersey to the extent it is relevant in assessing Y Tel's request.
Section 6:	Provides an assessment of other issues that may be relevant to a decision on spectrum allocations in the 3.4 - 3.8GHz bands.
Section 7	Sets out CICRA's provisional conclusions.

Interested parties are invited to submit comments to CICRA in writing or by email on the matters set out in this paper to the following addresses:

GCRA, Guernsey	JCRA, Jersey
Suites B1 & B2 Hirzel Court St Peter Port Guernsey GY1 2NH Email: info@cicra.gg	2 nd Floor, Salisbury House 1-9 Union Street St Helier Jersey JE2 3RF Email: info@cicra.je

All comments should be clearly marked "*Pan-Channel Island Consultation on Spectrum Awards in the 3.4 - 3.8 GHz Bands*" and should arrive by 5pm on Friday 15 March 2013.

In line with CICRA's consultation policy, the regulators intend to make responses to the consultation available on the CICRA website, the combined website of the GCRA and JCRA. Any material that is confidential should be put in a separate annex and

clearly marked as such so that it may be kept confidential. CICRA regrets that it is not in a position to respond individually to the responses to this consultation.

3. Legislative and Licensing Background

Legislative background and regulatory duties in the Channel Islands

The legislative bases for this consultation in Jersey are provided by the Competition Regulatory Authority (Jersey) Law 2001 and the Telecommunications (Jersey) Law 2002. In Guernsey, the relevant legislation is The Regulation of Utilities (Bailiwick of Guernsey) Law, 2001, The Guernsey Competition and Regulatory Authority Ordinance, 2012 and The Telecommunications (Bailiwick of Guernsey) Law, 2001. Any decision resulting from this consultation will be based on relevant laws and duties of the GCRA and the JCRA respectively.

The duties of the JCRA in the telecommunications sector are defined in Article 7 of the Telecommunications (Jersey) Law 2002; the relevant duties of the GCRA are those defined in Section 2 of The Regulation of Utilities (Bailiwick of Guernsey) Law, 2001 and transferred to it by Section 5 of the 2012 Ordinance mentioned above. In addition, there is scope for the States of Guernsey and States of Jersey to give directions to the GCRA and the JCRA respectively.

UK Legislation relevant to spectrum licensing in the Channel Islands

The use of spectrum in the Channel Islands is governed by UK legislation that has been extended to Guernsey and Jersey, as well as by international agreements between the UK and other countries on the use to which various bands of radio spectrum can be put and the avoidance of interference across borders. The licensing of spectrum, in the UK and in the Channel Islands, is carried out by the Office of Communications (*Ofcom*), by virtue of the powers given to it by the Wireless Telegraphy Act 2006 (*WTA*) and the Communications Act 2003¹.

Ofcom's principal and secondary duties are in Section 3 of the Communications Act 2003 ('General duties of *Ofcom*'), which provides that:

- (1) *It shall be the principal duty of OFCOM, in carrying out their functions—*
- (a) to further the interests of citizens in relation to communications matters;*
 - and*
 - (b) to further the interests of consumers in relevant markets, where appropriate by promoting competition.*
- (2) *The things which, by virtue of subsection (1), OFCOM are required to secure in the carrying out of their functions include, in particular, each of the following—*

¹ For the Channel Islands, as and to the extent that these Acts are extended to Jersey and Guernsey respectively.

*(a) the optimal use for wireless telegraphy of the electro-magnetic spectrum;
(...)*

Moreover, Section 3 of the WTA ('Duties of OFCOM when carrying out functions') further specifies Ofcom's duties as follows:

(1) In carrying out their radio spectrum functions, OFCOM must have regard, in particular, to—

- (a) the extent to which the electromagnetic spectrum is available for use, or further use, for wireless telegraphy;*
- (b) the demand for use of the spectrum for wireless telegraphy; and*
- (c) the demand that is likely to arise in future for the use of the spectrum for wireless telegraphy.*

(2) In carrying out those functions, they must also have regard, in particular, to the desirability of promoting—

- (a) the efficient management and use of the part of the electromagnetic spectrum available for wireless telegraphy;*
- (b) the economic and other benefits that may arise from the use of wireless telegraphy;*
- (c) the development of innovative services; and*
- (d) competition in the provision of electronic communications services.*

For the purposes of the spectrum relevant to this consultation, the respective roles of CICRA and Ofcom in coordinating the award of spectrum licences in the Channel Islands are as follows:

- CICRA ascertains the level and nature of demand for the spectrum in the bands related to the spectrum requested by Y Tel (i.e. 3.4 - 3.8 GHz). It identifies whether demand exceeds supply and a selection process is needed. Eventually, when the assessment and selection process is completed, it makes a recommendation to Ofcom; and
- Ofcom issues licences for spectrum use under the WTA where it is satisfied CICRA's recommendation is consistent with its own statutory duties.

4. CICRA's objectives

As set out in section 3, the legislative background relevant to the process initiated by this consultation includes several pieces of legislation. The GCRA and the JCRA have separate duties and objectives set by law that are very similar. CICRA believes that a joint allocation of spectrum across the Channel Islands – in particular, an allocation that is aligned across the Islands – contributes to the achievement of the GCRA's and the JCRA's particular objectives. CICRA therefore wishes to proceed according to a set of common objectives and duties which accurately reflect those of its two constituent authorities. It proposes that the following objectives should guide the process and criteria for the joint allocation of spectrum in the Channel Islands:

- to further consumers' interests in the short and long term, having regard to prices and costs, and the availability and range of services suitable to consumers' different needs;
- to promote competition as a mechanism to further its consumer interest objective;
- to have regard to and, where it lies within its powers and is practicable, to lessen the impact of the spectrum-dependent activities it regulates on the environment;
- to seek to ensure the processes and criteria adopted by CICRA are consistent with Ofcom's duties, including the duty to secure the optimal use for wireless telegraphy of the electro-magnetic spectrum;
- to the extent allowed by legislation, to deal with the Jersey and Guernsey Bailiwicks as a single economic and social entity.

The first three objectives summarise the duties that CICRA has, in one form or another, in the Islands' respective legislation. The fourth objective reflects Ofcom's own duties and seeks to ensure that CICRA's recommendations are acceptable to Ofcom. The last one translates the intention of the States of Jersey and Guernsey that there should be joint regulation of the radio spectrum available to both islands.

Q1. Respondents' views are sought on the above objectives. In particular, CICRA seeks views on the balance it should strike between these objectives and what that might mean in practice for potential applicants and users of the spectrum. These views are intended to inform what services CICRA should give greater priority to facilitating for the Islands and what obligations should be imposed on potential applicants in allocating spectrum in the 3.4-3.8 GHz bands.

5. Spectrum in the 3.4 – 3.8 GHz Bands

The purpose of this section is to describe the spectrum which is the object of this consultation and how it is used now, and to review possible future uses.

Spectrum Considered in this Consultation

Y Tel has asked for the allocation of a 2 x 20 MHz band between 3.48-3.50 GHz and 3.58-3.60 GHz in Guernsey. Such an allocation would be aligned with an allocation of 2 x 20 MHz in Jersey held by Newtel Limited (*Newtel*). Newtel is Y Tel's sister company and it is using its Jersey spectrum allocation to provide a wireless fixed broadband and telephone service using a WiMax communication standard.

An aligned allocation between Jersey and Guernsey enables Y Tel and Newtel to provide services in both islands while maximising their economies of scale. This is so because they can use the same communication standard and network eco-system in both islands. As noted above, CICRA believes that spectrum alignment across both Jersey and Guernsey is desirable and has already taken steps to promote alignment in spectrum bands where the initial allocations of spectrum were not aligned.

Each part of the radio spectrum has special characteristics that make it particularly desirable for specific purposes in the operations of mobile and fixed wireless networks. CICRA's objective in determining spectrum allocation, generally, is to ensure that spectrum bands with specific characteristics are available to a number of operators so that healthy competition in the provision of services to end customers can flourish. CICRA therefore needs to identify the range of spectrum bands that, from the perspective of telecommunication operators, can be substituted for one another and used interchangeably.

CICRA considers that the spectrum bands between 3.4 GHz and 3.8 GHz – to the extent that they are available for telecommunication purposes – can be used interchangeably by telecommunication operators. Demand for spectrum in this whole range, and availability of spectrum, therefore, needs to be considered in assessing Y Tel's request for 2 x 20 MHz in this range. However, as Newtel and Y Tel do not hold wireless telegraphy licences to use any other spectrum bands, CICRA does not consider it necessary, at this stage, to consider allocations in other parts of the radio spectrum.

Q2. Do you agree that it is appropriate to include the 3.4-3.8 GHz spectrum bands, and these bands only, in a consultation on the allocation of 2 x 20 MHz to Y Tel at 3.48/3.58 GHz in Guernsey?

Spectrum Availability in the 3.4-3.8 GHz Bands

Some spectrum is currently available in the 3.4-3.8 GHz bands in Guernsey and Jersey for the purpose of mobile telecommunication services:

- In the 3.4-3.6 GHz range, there is a 2 x 20 MHz band; it is allocated to Newtel in Jersey and requested by Y Tel in Guernsey;
- In the 3.6-3.8 GHz range, there is a pair of 2 x 30 MHz allocated to C&W in both Jersey and Guernsey and a pair of 2 x 70 MHz that is currently unallocated.

The rest of the 3.4-3.6 GHz spectrum is used by the Ministry of Defence in the UK, which is in the process of clearing most of it in order to release it for civil use. It is expected that this will happen around 2015 in the UK. It is expected that this spectrum may also become available in the Channel Islands.

Even if Y Tel were to receive the spectrum which it has requested, there would remain enough spectrum in the 3.6-3.8 GHz range to satisfy demand from three other operators in the immediate future, on the assumption that they received a similar amount of spectrum as Newtel and Y Tel.

Q3. Do you agree with the availability analysis reported above? This question may be best answered in connection with Q4 and Q5 in the next section.

However, the development of new technologies is leading to different forms of spectrum use which might affect the analysis above. This is discussed in the next section.

6. Issues Relevant to Spectrum Awards in the 3.4-3.8 GHz Bands

Spectrum Use in the 3.4-3.8 GHz Bands

The spectrum in the 3.4-3.8 GHz bands may be used for the purpose of providing mobile telecommunication services of the type already provided by mobile operators in the Channel Islands (i.e. 2G and 3G) and also for services provided by means of LTE and WiMAX technologies². LTE is particularly useful in providing the means to satisfy the vast increase in mobile data traffic that is now underway. Moreover, the 3.4-3.8 GHz bands are also suitable for the provision of fixed wireless broadband services, which the WiMAX standard, in particular, supports.

CICRA understands that new wireless telegraphy licences issued by Ofcom in the 3.4-3.8 GHz bands for use for telecommunication services would not specify the technologies and standards for which the spectrum may be used. Operators will be entitled to use the spectrum for mobile or fixed wireless services, as they choose, so as best to respond to customer wishes and market conditions. In principle, therefore, a spectrum licence granted to Y Tel by Ofcom, could allow it to provide mobile services as well as the fixed wireless services for which it is applying. In fact, however, the operating licence held by Y Tel in Guernsey, issued under *The Telecommunications (Bailiwick of Guernsey) Law, 2001*, only allows it to provide fixed services.

Q4. In view of the limitations in the use to which Y Tel can put the spectrum licence it is seeking, do you believe that there are reasons for not recommending it receives the spectrum licence that Ofcom may grant it?

² LTE: Long Term Evolution, the next evolution of cellular mobile technologies, part of the family of standards developed by standardisation body 3GPP that includes 3G/UMTS/HSPA, designed to provide high speed data services. WiMAX: Worldwide Interoperability for Microwave Access, another wireless technology suitable for high speed data services, developed by standardisation body IEEE.

7. CICRA's Provisional Conclusions

In view of the considerations in Sections 5 and 6 of this document, CICRA is minded to recommend that Ofcom issue a wireless telegraphy licence to Y Tel for the spectrum bands in Guernsey that are aligned with the spectrum licence held by Newtel in Jersey (2 x 20 MHz at 3.48 GHz and 3.58 GHz).

It proposes that this licence should not permit the provision of 4G mobile services, even if Y Tel were to obtain a mobile operator's licence in Guernsey, on the basis that this question is better considered in the context of the wider review of spectrum under way at present.

The licence should allow Y Tel to provide a fixed wireless service in Guernsey using whatever technology and duplexing scheme is permitted by Ofcom.

/ends

Frequency		J	G	Jersey					Guernsey						MHz
				MHz					MHz						MHz
2115.0 - 2120.0	1925.0 - 1930.0			5				Marathon							5
2120.0 - 2130.0	1930.0 - 1940.0			10		Airtel(J)			10		Airtel(G)				10
2130.0 - 2140.0	1940.0 - 1950.0														10
2140.0 - 2150.0	1950.0 - 1960.0			10	Jersey T				10	JT(G)					10
2150.0 - 2160.0	1960.0 - 1970.0			10			C&W(J)		10		C&W(G)				10
2160.0 - 2170.0	1970.0 - 1980.0														10
3.480 - 3.500	3.580 - 3.600			20				Newtel(J)							20
3.600 - 3.630	3.700 - 3.730			30			C&W(J)		30		C&W(G)				30
3.630 - 3.700	3.730 - 3.800				-					-					70
10.125 - 10.165	10.475 - 10.515				-					-					
10.165 - 10.225	10.515 - 10.575				-				60	JT(G)					60
28.0525 - 28.1645	29.0605 - 29.1725				-				112	JT(G)					112
28.1925 - 28.3045	29.2005 - 29.3125				-					-					
29.3325 - 28.4445	29.3405 - 29.4525				-					-					