



GIBRALTAR REGULATORY
AUTHORITY

Consultation on the Licensing of 4G Mobile Services & Liberalisation of Mobile Bands in Gibraltar

Public Consultation 3/13

2nd December 2013

Gibraltar Regulatory Authority

Spectrum Management

Suite 603, Europort

Gibraltar

Telephone +350 20074636 Fax +350 20072166

Email: radio@gra.gi

Web: <http://www.gra.gi>

CONTENTS

1.	Executive summary	3
2.	Introduction	4
2.1.	Consultation Procedure and Timetable	4
2.2.	Structure of the Paper	4
3.	Introduction to Mobile services	5
3.1.	Background to 4G	5
3.2.	Available mobile spectrum	6
3.3.	Current 2G and 3G spectrum assignments	6
3.4.	900 MHz band	7
3.5.	1800 MHz band	7
3.6.	2100 MHz band	7
3.7.	Candidate bands for 4G services	7
3.8.	800 MHz band	7
3.9.	2600 MHz band	8
3.10.	Spectrum Liberalisation	9
3.11.	Future IMT Bands	10
3.11.1.	700 MHz Band	10
3.12.	Equalisation of spectrum holdings	10
4.	4G and Mobile Spectrum fees (Part VI Licence)	11
4.1.	Review of 2G Spectrum fees (900 MHz and 1800 MHz)	11
4.2.	Review of 3G UMTS spectrum fees (2100 MHz)	12
4.3.	Proposed 4G spectrum fees	12
5.	Award process to provide 4G services	12
5.1.	Background to selection of 4G award process	12
5.2.	Details of proposed 4G licence award process	14
5.3.	Minimum service criteria to be included in the 4G licences	15
6.	List of Questions	16
7.	Appendix 1	17

1. Executive summary

This consultation is concerned with the Gibraltar Regulatory Authority's ("GRA") proposals to licence the provision of 4G mobile communications services in Gibraltar. The introduction of 4G mobile is particularly suited to the provision of better mobile data services, faster speeds and improved quality of service, which means that, potentially, broadband delivered over mobile networks could be as good as or, in some circumstances, even better than broadband delivered over the fixed network.

The focus of this consultation is on the process for licensing 4G services in Gibraltar and, in this context, to set out the GRA's plans for the spectrum bands which should be granted access for the provision of 4G services. In this regard, the GRA has considered current spectrum assignments, and has considered what spectrum is available, and how this may best be offered to mobile operators.

The GRA's proposals are that spectrum should be made available in the 800MHz and 2600 MHz bands to support the provision of 4G services. The GRA considers that there is not sufficient spectrum which would allow operators to offer higher data rates of 4G in the 900 MHz and 1800 MHz bands. In order to ensure that such awards can be made, the GRA proposes to licence up to three 4G operators. The GRA also proposes that, in parallel with the 4G awards, spectrum already allocated should be liberalised, so that operators can choose which technologies to use for the services they provide.

In order to provide 4G services in Gibraltar, operators will have notified the GRA as a network provider under Regulation 4(10) of the Communications (Authorisation and Licensing) Regulations 2006 (the "Regulation") and hold the respective Part VI Licence as granted under the Communications Act 2006 (the "Act") for use of the electromagnetic spectrum, or will have to notify under the Regulation prior to obtaining a Part VI licence.

The fees to charge for the use of 4G spectrum have been considered and the current fees for 2G and 3G have been re-evaluated. The proposed fees have been arrived at considering, but not limiting to, the following factors:

- Demand for spectrum,
- Availability of the required bands,
- Interoperability of technology allowed in the band due to sharing constraints or international sharing agreements.

The GRA has built into the award process a methodology that takes account of the possibility of interest from new operators as well as current mobile operators. The GRA proposes to define a set of service and performance criteria, which all applicants will be expected to meet. Should there be more than three valid applications from suitably qualified bidders, the GRA, after examining the market sustainability of more than three operators, could propose to invite sealed bids setting out detailed business plans and implementation schedules with an aim to award spectrum to the best proposals.

2. Introduction

2.1. Consultation Procedure and Timetable

The GRA invites views from interested parties on this consultative document. Comments should be submitted in writing before 5pm on Wednesday 15th January 2014 to: -

Gibraltar Regulatory Authority
Suite 603
Europort
Gibraltar

Email: radio@gra.gi

All comments are welcome, but it would make the task of analysing responses easier if comments are referenced to the relevant question numbers. Unless marked confidential, the GRA will make copies of the comments available for public inspection at its offices or online.

The GRA will analyse your comments, take them into consideration in its review and issue a Decision Notice on this matter.

This consultative document is not a legal document and does not constitute legal, commercial or technical advice. The GRA is not bound by it. The consultation is without prejudice to the legal position of the GRA or its rights and duties under the relevant legislation.

2.2. Structure of the Paper

This paper is structured into a number of main sections, as follows: -

- **Section 3** Identifies spectrum bands which may be made available in this award process. Section 3 also sets out the GRA's proposals on the specific spectrum allocations which could be awarded.
- **Section 4** Proposed spectrum charge for licensing of 4G spectrum and proposed fee changes to existing mobile frequencies bands.
- **Section 5** sets out the GRA's proposals for the process which will be followed in awarding the 4G licences.
- **Section 6 contains a summary of questions.**

3. Introduction to Mobile services

3.1. Background to 4G

This consultation is concerned with proposals for the licensing of 4G mobile communications services in Gibraltar and the spectrum bands that should be assigned for use for this purpose. The GRA's objectives are to maximize the efficient use of the electromagnetic spectrum in Gibraltar and to establish adequate conditions whereby operators are encouraged to roll out next generation networks and services to make Gibraltar a leader in communications. This consultation focuses on the process whereby 4G operators are granted access to sufficient spectrum to enable the provision of leading-edge 4G services.

With 4G technology, the distinction between voice and data is less marked than is the case in previous mobile technologies. While 2G mobile introduced customers to SMS and emails from their phones, and 3G supported smartphones and data, 4G is ideally suited for high-bandwidth data services, such as live TV or streaming high quality video. According to OFCOM in the UK, for a typical user, download speeds of initial 4G networks are likely to be at least 5-7 times faster than existing 3G networks, and as the networks develop, significantly higher speeds are expected.¹

There has been a rapid growth in demand for mobile data over the last few years, and this is likely to continue. In Gibraltar, this has been driven primarily by the use of data services on mobile phones. Due to Gibraltar's size, and the 'mobility' benefit of mobile broadband, both for 'nomadic' use and accessing mobile broadband on, for example, public transport, is not likely to be as significant as in other larger jurisdictions.

The introduction of 4G mobile will facilitate the offering of better mobile data services, in particular faster speeds and improved quality of service, which means that, in some cases, broadband delivered over the mobile network could be as good as or even better than broadband delivered via Wi-Fi routers over the fixed network.

Legal and Regulatory Background

The GRA is responsible for managing the electromagnetic spectrum on behalf of Her Majesty's Government of Gibraltar, which includes issuing licences for telecommunications and broadcasting services in Gibraltar. The GRA's powers include:

- specifying the nature of the telecommunications systems and services which operators are permitted to operate and provide under licence; and
- setting conditions on such operation and provision.

The GRA licenses and regulates the use of radio spectrum in Gibraltar under the Communications Act 2006.

Regulatory framework for the licensing of 4G services

¹ Ofcom suggests 3G at 1 Mbps and 4G at 6 Mbps, Ofcom statement 20.12.12 (<http://media.ofcom.org.uk/2012/12/20/4g-auction-bidders-announced/>)

The GRA will apply the framework as with other mobile telephony technologies namely 2G and 3G. This framework consists of a Part VI licence under the Act to use the electromagnetic spectrum and a notification as a network provider under Regulation 4(10) of the Regulation.

Preliminary conclusion

The GRA proposes to insert new conditions into the Part VI Licences issued under the Act, as being the best route to secure licensing consistency between incumbents and any new licensees, regulatory control and speedy delivery of 4G services. The GRA wishes to ensure that the new 4G services are launched at the earliest date possible in a way which is most effective and which will offer optimum service for customers. For the purposes of this consultation, the term '4G licence' is taken to mean spectrum granting usage rights to the relevant spectrum bands.

The consultation proceeds on the basis that the most suitable way to bring forward licensing of 4G mobile communications services in Gibraltar is by inserting conditions in a licence issued under the Communications Act 2006 to an operator (including any new operator). The aim of this proposal is that each of the successful applicants will be ultimately operating under a consistent set of licence conditions relevant to their provision of any mobile services, including 4G.

Any applicant will have to notify as a network provider under Regulation 4(10) of the Regulations in order to provide 4G services. However, more importantly, a new licensee would first have to secure sufficient radio spectrum under Part VI of the Act in order to be able to provide a robust network.²

3.2. Available mobile spectrum

In this section, the spectrum bands that may be made available for use in the provision of 4G services in Gibraltar are examined. This analysis covers both the bands that are currently in use for 2G and 3G mobile services as well as the other bands where spectrum may also be made available for 4G. The options for the liberalisation of all mobile spectrum assignments is then discussed, following which the GRA's proposals for the award of up to three 4G licences are set out.

As a guideline, the recommended bandwidth requirements for each technology are listed below:

- 2G services: 200 kHz channels
- 3G services: 5 MHz Channels (25 x 200 kHz)
- 4G services: 10- 15 MHz Channels (50 – 75 x 200 kHz)

3.3 Current 2G and 3G spectrum assignments

At the present time, Gibtelecom Limited and Eazi Telecom Limited hold Part VI licences to provide 2G and 3G mobile services in Gibraltar. Both operators utilise spectrum in the 1800MHz bands to support the provision of 2G mobile services and they are also licensed

² 'Notice Concerning the General Criteria For The Grant Of Licences Limited In Number. Notice No. 7/2006'. <http://www.gra.gi/sites/communications/downloads/66/notice%207-2006%20comms.pdf>

to use 2100 MHz spectrum for the provision of 3G services. Only Gibtelecom Limited has an allocation in the 900 MHz band.

3.4 900 MHz band

Due to the lack of co-ordination and spectrum sharing with neighbouring countries, the channels available are extremely fragmented and availability is poor. Therefore, any spectrum re-farming would involve international co-ordination and there is little indication this can be addressed within a short time scale. There is no available spectrum to allow a second local operator to have a reliable 2G network in this band. Currently, Gibtelecom Limited has 33 x 200kHz channels (6.6 MHz fragmented).

Question 1: Do you agree with the GRA's evaluation of the 900 MHz band?

3.5 1800 MHz band

Both Gibtelecom Limited (31 x 200 kHz, 6.2 MHz) and Eazi Telecom Limited (53 x 200 kHz, 10.6 MHz) have several channel allocations in this band, but as with the 900 MHz, the spectrum is fragmented and it will be hard to amalgamate a sufficiently large number of 200kHz channels contiguously to be able to provide 3G or 4G services in this band without international co-ordination. Furthermore, there seems to be very little spectrum available to allow a third 2G operator to have a reliable 2G network on this band.

Question 2: Do you agree with the GRA's evaluation of the 1800 MHz band?

3.6 2100 MHz band

Both Gibtelecom Limited and Eazi Telecom Limited have equal allocations of 5 MHz FDD spectrum in this band used for 3G services. There is an additional 10 MHz reserved to each operator as well as an extra 10 MHz for a potential third operator in this band.

Question 3: Do you consider this band suitable for 4G?

3.7 Candidate bands for 4G services

4G mobile networks are being deployed across the world using spectrum in a number of different frequency bands. Typically, 4G networks are being deployed so that both coverage and capacity are maximised and, in order to do this, a mix of spectrum bands – which offer different radio propagations – are being used.³

3.8 800 MHz band

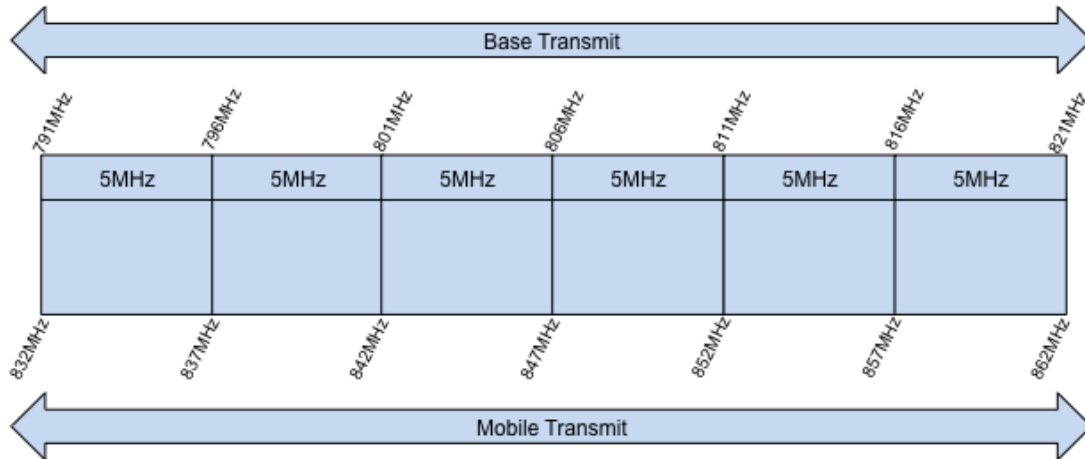
This band (encompassing spectrum in the range 791MHz to 862MHz) is one of the bands that has been identified by the International Telecommunication Union (ITU) as a global harmonised band for the provision of International Mobile Telecommunications (IMT) services.⁴ The band comprises the so-called 'Digital Dividend' spectrum that has been

³ The lower the frequency band, the wider the area that can be covered from a given cell site. Lower frequency bands (i.e. sub- 1GHz) also facilitate greater in-building coverage than higher frequency bands (e.g. 3G services provided over the 2.1GHz band).

⁴ At the 2007 World Radiocommunication Conference (WRC-07) the ITU designated the 450–470 MHz band, the 698–862 MHz band (in Region 2 and nine countries of Region 3), the 790–862 MHz band (in Regions 1, i.e. Europe and 3), the 2.3–2.4 GHz band and the 3.4–3.6 GHz band (no global allocation, but accepted by many countries) as globally harmonised spectrum for use by IMT. See ITU press release at: http://www.itu.int/newsroom/press_releases/2007/36.html.

freed up for re-use arising from the digital TV switchover to support the deployment of advanced mobile broadband services. The digital switchover was completed in Gibraltar in December 2012 and the 800MHz band is now available for allocation to 4G services.

Within the EU, the European Commission's Decision 2010/267/EU of 6 May 2010⁵ confirmed the recommendation contained in CEPT's report to the EC of 30 October 2013 that the 800MHz band plan be based on a channel arrangement whereby 2 x 30MHz of spectrum be made available in six FDD paired blocks of 2 x 5MHz bandwidth, as is illustrated in Figure 4 below. This band plan, which is mandatory within the EU, has now been implemented in a number of Member States, including Germany, Ireland and the UK.



The GRA is considering the 800MHz band as the main low-frequency band to be used in the deployment of mobile services with a keen interest in 4G services. Operators deploying 4G networks in Gibraltar are likely to want to do so using the harmonized 800MHz band and it therefore makes sense for the GRA to provide access to this spectrum, in which there should be ample bandwidth (2 x 30MHz) available for assignment.

In making access available to the 800MHz band, the GRA wishes to draw attention to the possible need to mitigate interference from mobile services to Digital Terrestrial Television (DTT) services in the band below 790MHz. Although no DTT services in Gibraltar will be affected, any interference issue could affect DTT services in neighbouring countries. The GRA will endeavour to resolve such issues via international agreements with neighbouring countries.

Question 4: Do you agree with the GRA's evaluation of the 800 MHz band?

3.9 2600 MHz band

The 2600 MHz band, encompassing spectrum in the range 2500MHz to 2690MHz, has also been identified - globally by the ITU⁶ and within the EU by the European Commission⁷ - as

⁵ European Commission Decision 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 EU (Commission Decision 2010/267/EU)

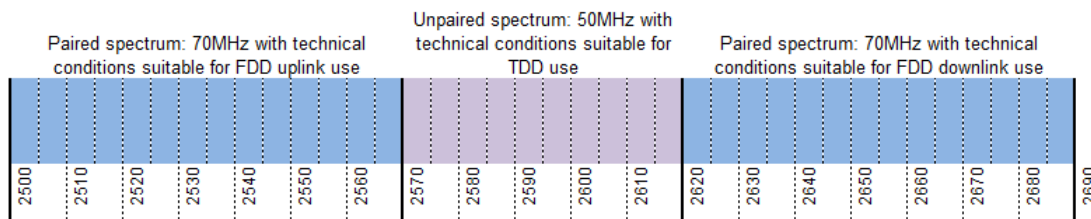
⁶ Initially, at WRC 2000, as the 'IMT-2000 expansion band' with the intention that it be assigned as additional 3G spectrum. This decision was made at a time when it was believed that there would be rapid growth in 3G services, thus creating a requirement for 3G operators to secure access to additional spectrum. Slower than anticipated deployment of 3G networks and lower than expected take-up meant that this 3G spectrum requirement never materialized. At WRC-07, the band was harmonised on a global basis for the provision of terrestrial mobile services.

a spectrum band that is suitable for use in the provision of terrestrial electronic communications services, including mobile broadband services.

Spectrum in the 2600 MHz band has been allocated within Europe for both FDD and TDD use. In the UK, the 2600 MHz band plan accords with that set out in the annex to the European Commission's Decision of 13 June 2008 (2008/477/EC)⁸ which designates 2500 to 2570 MHz paired with 2620 to 2690 MHz for FDD use and indicates that administrations may assign 2570 to 2620 MHz for TDD use or for external FDD downlink.

Question 5: Should the channel plan be the same as the UK for the 2600MHz Band?

An issue which has arisen in the UK and elsewhere, in relation to the use of the 2600 MHz band for 4G mobile services, is the possible interference with radar equipment; in particular those used for air traffic control purposes.⁹ However, in the Gibraltar Frequency Register there are no reservations or assignments of any frequencies in this band. Therefore, we do not foresee any issues in releasing the 2600 MHz band to the mobile operators for 4G usage. The 2600 MHz band is currently unallocated within Gibraltar and would be available for assignment for 4G services.



Question 6: Do you agree with the GRA's evaluation of the 2600 MHz band?

3.10 Spectrum Liberalisation

The GRA is considering whether it should liberalise spectrum rights of use in all mobile bands. This would mean that all the bands would be freed from service and technology restrictions, leaving operators free to make their own operational choices regarding which services to provide in which bands. This will ultimately be restricted only by the conditions agreed upon in international agreements with neighbouring countries, especially the 900 MHz and 1800 MHz bands.

The liberalisation of current 2G and 3G spectrum allocations would require an editorial variation in the current and future Part VI licence schedules, so that they are no longer technology-specific.

Question 7: Should the GRA proceed to liberalise the mobile bands?

⁷ European Commission Decision of 13 June 2008 on the harmonisation of the 2500 – 2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community (Commission Decision 2008/447/EC), available at: <http://bit.ly/X2HR30>. In addition, the European Council and Parliament Decision of 14 March 2012 (Decision No. 242/2012/EU) on establishing a multiannual radio spectrum policy programme (available at: <http://bit.ly/GHYZCX>) obliges Member States to carry out authorization processes for access to the 2.6GHz band before the end of 2012.

⁸ See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:163:0037:0041:EN:PDF>

⁹ See: http://stakeholders.ofcom.org.uk/spectrum/spectrum-awards/prospective-awards/award_2010/comm-signals-26-band/

3.11 Future IMT Bands

Ongoing discussion in preparation towards WRC2015 and beyond, may see the conference agreeing to the additional allocation of mobile services in other bands in the range < 1 GHz. The GRA will, in due course, produce a follow up consultation on this matter once the short, medium and long term spectrum requirements of local mobile operators are assessed.

3.11.1 700 MHz Band

Television channel 56 (750 MHz – 758 MHz) is assigned to Gibraltar under the Geneva 2006 Digital Broadcasting plan in this band and may need to be migrated to a lower frequency for the introduction of mobile services. A substantial investment has already been made in the current DTT network and any migration to another channel could constitute a major expense. The GRA proposes that this expense be offset by the mobile operators or future users of this band.

Question 8: Do you agree with the GRA's position regarding the 700 MHz band?

3.12 Equalisation of spectrum holdings

A final spectrum-related issue that the GRA intends to deal with in the context of the award of 4G licences - bearing in mind its proposed concurrent move to liberalise spectrum mobile usage and allow for the re-licensing of a third operator – is to seek to ensure that at the end of the process all three potential mobile operators have usage rights over equal amounts of spectrum in the same bands. The GRA would seek to equalise current holdings with the consent of the Minister and in consultation with existing operators.

At present Gibtelecom Limited has allocations in 900 MHz, 1800 MHz and 2100 MHz and Eazi Telecom Limited has spectrum in the 1800 MHz and 2100 MHz.

Question 9: Should the GRA research in detail the potential of Spectrum Equalisation between local mobile operators before re-farming the 900 MHz & 1800 MHz bands?

In moving to a position of balanced and proportional spectrum holdings at the end of the 4G licensing process, and should all current operators be awarded 4G licences, the GRA would consult with operators on the following steps:

- In the 900MHz band encourage Gibtelecom to release part of its allocation in this band;
- In the 1800MHz band encourage Gibtelecom and EaziTelecom to release part of their allocation in this band;
- The process would result in the a balanced and proportional distribution in the 900 MHz band and the 1800 MHz band, and a third mobile licence, the new licensee would also be entitled to take up spectrum assignments in these bands;
- Should 4G spectrum remain unallocated (for example, if there is no third licence awarded) the GRA will consider in due course how to make best use of that

spectrum.

It is the GRA's view that a balanced and proportional distribution of spectrum is desirable, to ensure that there is no distortion of competition in the electronic communications sector which provides mobile networks.

It should be noted that in accordance with the provisions of Section 59B(6) of the Communications Act, the Minister intends to publish a notice on the Authority's website, that subsections (1) to (5) of section 59B, which deal with the transfer or lease of individual rights to use radio frequencies, shall not apply where the individual right to use radio frequencies was initially obtained free of charge by the licensee. In Gibraltar, as radio spectrum (i.e. the right to use radio frequencies) has not been auctioned or awarded by any other similar means, e.g. a beauty contest, the right to transfer or lease individual rights may not apply.

4 4G and Mobile Spectrum fees (Part VI Licence)

4.1 Review of 2G Spectrum fees (900 MHz and 1800 MHz)

The table below shows the current¹⁰ and proposed related spectrum fees for each respective band under consideration for the current period 1st April 2013 – 31st March 2014. Please note that a cumulative annual 4% increase effective on the 1st April will still be applied.

Mobile Public Operator	1st April 2013		31st March 2014	
		Per 200kHz		Per 5 MHz
900 MHz				
Current GSM 900 Licence fee		£ 3,028.00	£	75,700.00
Proposed fee		£ 3,100.00	£	77,500.00
1800 MHz				
Current GSM 1800 Licence fee		£ 3,028.00	£	75,700.00
Proposed fee		£ 2,800.00	£	70,000.00
2100MHz				
Current 3G Licence fee -		£ 4,737.00	£	118,425.00
Proposed fee		£ 1,600.00	£	40,000.00
Proposed 4G Spectrum				
Proposed fee 800 MHz		£ 1,600.00	£	40,000.00
Proposed fee 2600 MHz		£ 1,600.00	£	40,000.00

The following criteria have been taken into consideration when setting the fees:

¹⁰ Direction Concerning Fees for Certain Part VI Licences M01/2011
http://www.gra.gi/sites/communications/downloads/312/dir_m01_2011.pdf

- Spectrum availability in the respective bands;
- Spectrum requirements to be able to provide an effective network;
- Total estimated cost of Mobile Spectrum fees each operator would pay. This has a direct bearing on the operational expenditure of each individual network and ultimately influences the price end consumers pay. By reducing costs in certain bands and increasing them in others, the GRA aims to encourage a shift to more available spectrum and at the same time offer the operators an opportunity to reduce the cost to the consumer.

4.2 Review of 3G UMTS spectrum fees (2100 MHz)

The current fee is £4737.00 per 2 x 200 kHz including a cumulative annual 4% increase effective on the 1st April of each year. Currently the fee for each 5 MHz block is £118,425.00, but considering 4G requirements of 15 MHz, the total fee of £355,275.00 is considered to be excessive.

4.3 Proposed 4G spectrum fees

The proposed bands below should be relatively clear and have the potential to meet 4G spectrum requirements of three local operators. Therefore, the proposed fee structure should help promote the launch of 4G networks and services in Gibraltar.

Question 10: Do you agree with the proposed fee structure?

5 Award process to provide 4G services

5.1 Background to selection of 4G award process

In this section, the GRA sets out its plans on how it intends to award 4G licences. In framing its proposals, the GRA has been mindful of the aim to ensure that spectrum usage rights are assigned in a manner that maximises investment in communications infrastructure and services in Gibraltar. The GRA also wishes to use an award process that will ensure that access to 4G spectrum is granted at the earliest possible opportunity so that Gibraltar can rapidly deploy advanced mobile communications infrastructure.

The GRA favours using a comparative selection process to award commercial spectrum licences, including those for 4G services. In doing so, the GRA emphasis is to see spectrum being used to the maximum effect and to facilitate the development of new products and services. The GRA noted that the use of a comparative evaluation process (or 'beauty contest') would also ensure that service commitments made by licence applicants could be included as part of their licences and so become subject to regulatory oversight.

In light of this, the GRA's starting point in devising an award process for 4G has been that a comparative selection process should be used. That said, the GRA's main objective is to ensure the early completion of the 4G licensing process and also that this process should be one that ensures maximum investment in infrastructure. As a result, the GRA has reviewed its options for licence award to see if a comparative selection process is, in fact,

the optimum one to use in the case of 4G or whether a more effective award method is available.

Given the amount of spectrum that is available, this raises the question of whether or not there is likely to be any excess demand for the three 4G licences that the GRA intends to grant. Making available three 4G licences could potentially result in licences being granted to both of the existing mobile operators (although it is no longer planned to reserve 4G spectrum for existing players) as well as to a new market entrant. If this were to happen, then despite the fact that it would result in new market entry, it could still be the case that there is no excess demand for 4G spectrum in Gibraltar at this point in time.

If it is the case that there is no excess demand for the 4G licences that the GRA intends to offer, i.e. that three or fewer applications are received, this raises the question as to whether or not a comparative selection process is, in fact, the optimal method to use to assign the 4G licences. The GRA is mindful of the burden such a process tends to place on applicants, as a 'beauty contest' typically involves the preparation of detailed bids, setting forth applicants' plans for how they would intend to meet (or exceed) whatever evaluation criteria may be laid down in the invitation to tender. A significant period of time would need to be given to prospective applicants to prepare such bids and sufficient time would also need to be factored in for the evaluation of the bids by the GRA.

The GRA is concerned that, in a situation where there is no excess demand for the 4G licences, a comparative selection process may result in applicants expending a large amount of unnecessary effort, given that, under a scenario where there is no excess demand, all applicants who submit a valid bid would eventually secure a 4G licence. While a 'beauty contest' would result in applicants making competitive commitments in relation to issues such as service deployment, speed of rollout etc. – which the GRA is keen to see – the process would, of necessity, take several months to conclude. This, in turn, could mean a delay in the launch of 4G services in Gibraltar.

As a result, the GRA has some doubts as to whether or not a fully-fledged comparative selection process would meet its key aim of ensuring the early completion of the 4G licensing process. It has therefore considered if an alternative award method could be used; one that would result in a more rapid completion of the licensing process while at the same time capturing the most important elements that would arise from a comparative evaluation process, i.e. commitments on key service issues made by licence applicants. The GRA is happy that its proposed award process – details of which are set out below – meets these twin objectives and that, as a result, it is appropriate that this method rather than a comparative selection be used to award 4G licences.

While the GRA is keen to put in place a process that allows for the 'fast-track' of 4G where there is no excess demand for the spectrum, it has also factored into its proposed award process the scenario where there is excess demand. In such a situation there would need to be a competitive element introduced to the process, in order to arrive at the three winning bids. In this regard, the GRA has considered if it would be advisable to use a comparative selection as the competitive element in the process or if some other selection method should be used. Having considered this issue carefully, the GRA has concluded that the use of sealed bids would be preferable to a comparative selection in a situation where there is excess demand for the spectrum.

It is the GRA's view that its chosen award process is one that is best placed to meet its aims in relation to the allocation of 4G licences to interested parties and that this method

will provide a more efficient outcome than the alternative of using a comparative selection process. By using this method, the GRA will be able to ensure that the licensing process is carried out swiftly and, if the situation arises whereby there is excess demand for the spectrum on offer, the use of sealed bids will ensure that the licences are allocated to those parties who value the spectrum the greatest.

In addition, the GRA is confident that its award process will be able to guarantee that commitments in areas such as service launch, speed of rollout, network coverage and quality of service are reflected in the licences of the 4G operators. In this way, virtually all of the benefits of using a comparative selection process will be captured by this method, with none of the attendant downsides in terms of the burden that would be imposed on 'beauty contest' applicants and the additional time that would be required to complete this kind of licensing process.

Finally, the GRA is confident that its proposed licensing process – which should be completed by the end of the first quarter of 2014, – will enable operators to launch 4G services in Gibraltar before the end of 2014. Such an outcome would enhance Gibraltar's innovation in this area, to the benefit of the wider economy on the Rock.

5.2 Details of proposed 4G licence award process

As explained above, in putting in place an award process for 4G, the GRA has considered two possible outcomes, i.e. (i) where there is no excess demand for the spectrum on offer and (ii) where there is excess demand. These alternative scenarios may be catered for by using an award process in which the level of interest in the spectrum is assessed at the outset. Assuming there is no excess demand, licences can be awarded to all valid applicants who express an interest in acquiring a licence. The process also caters for a situation where there is excess demand and where, as a result, the licences are awarded on a competitive basis.

Based on the foregoing, details of the GRA's proposed award process are as follows:

- **Application Stage:** This stage involves the GRA issuing a public call for expressions of interest to prospective 4G operators. The 4G licences will, as explained earlier in this document, comprise a Part VI licence issued under the Act and where applicable a notification, under Regulation 4(10) of the Regulation, held by or issued to the operator that is being licensed to provide 4G services. The call for expressions of interest will set a set of minimum criteria which the GRA considers should be required of each operator providing 4G services, and hence which each 4G licence applicant will need to meet. The set of minimum criteria are conditions attached to the respective Part VI licences, and the GRA will ensure compliance with licence conditions Appendix 1 and including those set out in section 5 below. The GRA will not issue a licence to a particular communications provider unless that communications provider accepts these conditions.

Potential service criteria are outlined in the next section. These criteria will be included in the conditions to be inserted in the Part VI Communications Act licences. A draft Part VI 4G licence will be made available with the call for expressions of interest. Draft new conditions are attached as Appendix 1. Applicants for the 4G licences will be required to complete an application form that will be published in the call for expressions of interest, in which applicants will be required to confirm their willingness to accept as licence conditions to be included

in the Part VI licences, the prescribed minimum criteria for the provision of 4G services. This will constitute the contractual acceptance of the award process.

- **Qualification Stage:** This stage involves the GRA's evaluation of the applications received in response to its call for expressions of interest in order to determine the number of valid applications received. If three or fewer valid applications are received, the GRA will inform each valid applicant that they have qualified for the right to be awarded a 4G licence. Each valid applicant will then be required to confirm that they wish to be awarded a licence. If there are three or fewer valid applicants, the process will then proceed to the Award Stage. If four or more valid applications are received, however, all valid applicants will be informed that the process will continue with the Sealed Bid Stage.
- **Sealed Bids Stage:** This stage will only be required under a scenario where more than three valid applications are received and it involves the GRA inviting all valid applicants to submit sealed bids setting out their financial offers for the service. The GRA will evaluate the sealed bids received from valid applicants and will rank the applicants' bids in descending order according to the highest monetary/or rollout values contained in the sealed bids. The three highest-ranked applicants will then be informed that their licence application has been successful.
- **Award Stage:** This final stage in the process involves the GRA awarding the 4G Part VI licences to the successful applicants, either following the Qualification Stage or the Sealed Bid Stage. The award of 4G Part VI licences to existing mobile operators will entail a variation of the Notification of Service. On award, successful applicants will then be required to submit a non-refundable fee of £1,000.

5.3 Minimum service criteria to be included in the 4G licences

As outlined above, the GRA plans to specify within each of the 4G licences it intends to offer the minimum service criteria that will apply to the provision of 4G services in Gibraltar. The GRA proposes that service criteria are included in conditions inserted into the Part VI licences.

In this respect, the GRA intends to include the following service characteristics within each of the 4G licences:

- **Launch date:** 4G operators will be obliged to launch commercial services within nine months of licence award;
- **Coverage at launch:** 4G operators will be obliged to provide at least 70% population coverage at launch;
- **Population coverage to be achieved:** 4G operators will be obliged to provide at least 95% population coverage within two years of service launch;
- **Minimum mobile broadband data speed provided:** 4G operators will be obliged to offer minimum download speeds of at least 5 Mbps over their networks.

Question 11: Do you agree with the GRA proposal to include a number of service criteria in the areas outlined above within the 4G licences? Respondents are invited to provide views on the proposed characteristics, including what parameters they believe would be appropriate for each and on the award process.

6 List of Questions

Question 1: Do you agree with the GRA's evaluation of the 900 MHz band?

Question 2: Do you agree with the GRA's evaluation of the 1800 MHz band?

Question 3: Do you consider this band suitable for 4G?

Question 4: Do you agree with the GRA's evaluation of the 800 MHz band?

Question 5: Should the channel plan be the same as the UK for the 2600MHz Band?

Question 6: Do you agree with the GRA's evaluation of the 2600 MHz band?

Question 7: Should the GRA proceed to liberalise the mobile bands?

Question 8: Do you agree with the GRA's position regarding the 700 MHz band?

Question 9: Should the GRA research in detail the potential of Spectrum Equalisation between local mobile operators before re-farming the 900 MHz & 1800 MHz bands?

Question 10: Do you agree with the proposed fee structure?

Question 11: Do you agree with the GRA proposes to include a number of service criteria in the areas outlined above within the 4G licences? Respondents are invited to provide views on the proposed characteristics, including what parameters they believe would be appropriate for each and on the award process.

7 Appendix 1 Draft Part VI Mobile Licence



HER MAJESTY'S GOVERNMENT OF GIBRALTAR
COMMUNICATIONS ACT 2006

Radiocommunications (Mobile Telephony) Licence

Licence granted under the provisions of section 61 of the Communications Act 2006 to keep and have possession of apparatus for radiocommunications for the purpose of the provision of a mobile public telephone network.

To be produced on demand – Not transferable.

In accordance with the provisions of Part VI of the Communications Act 2006, the following licence is hereby granted to: XXXXXX.

Duration of Licence

1. This Licence shall come into operation on the Xst day of X 20XX, and unless previously revoked shall expire on the Xth day of X 20XX.

Definitions and interpretation

2. (1) In this Licence -

“Act” means the Communications Act 2006;

“Apparatus” means the electronic communications apparatus for radiocommunications specified in the Second Schedule;

“Authority” means the Gibraltar Regulatory Authority

“Licensee” means the person to whom this Licence is granted;

“radiocommunications” has the meaning given in section 27(1) of the Act;

“Service” means the publicly available mobile telephone service authorised following the notification requirement established under Regulation 4 of the Communications (Authorisation and Licensing) Regulations 2006.

Nature of the Licence

3. The Licensee is hereby authorised to keep, have possession of, install, maintain, work and use the Apparatus at the places specified in the First Schedule.
4. This Licence is granted subject to its terms, all lawful directions of the Minister or the Authority or both as the case may be and all applicable laws of Gibraltar.
5. The Licensee shall comply with, and shall not act in breach of the terms of this Licence, any lawful directions of the Minister or the Authority or both as the case may be and any applicable laws of Gibraltar.
6. Nothing in this Licence shall absolve the Licensee from any requirement in law to obtain such additional consents, permits, authorisations or licences as may be necessary for the provision of all or any part of the Service, and for the exercise of its rights or discharge of its obligations under this Licence.
7. (1) It shall be a condition of this Licence –
 - (a) that the Apparatus shall be used only for the purpose of the provision of the Service;
 - (b) that the Apparatus shall be used only on the radio frequency channels specified in the Third Schedule and that those channels shall be used in an efficient manner;
 - (c) that, without prejudice to the generality of paragraph 5, if the Authority –
 - (i) is satisfied that the use of any of the Apparatus is causing, or is likely to cause, interference with any other apparatus for radiocommunications; and
 - (ii) gives to the Licensee or sends to the Licensee, at the address of the Licensee specified in this Licence or notified to the Minister and the Authority under subparagraph (o), a notice requiring that the Apparatus be modified or adjusted before such day and in such manner as may be specified in the notice or that the use thereof shall cease on and from such day, or during such period or such hours or such days, as may be specified in the notice,the Licensee shall ensure that the requirement is complied with;
 - (d) that this Licence is personal to the Licensee;

- (e) that the Licensee shall not sub-license or grant any right, interest or entitlement in this Licence whatsoever without the consent of the Authority;
- (f) that the Licensee shall not transfer, assign or otherwise dispose of this Licence to any person without the consent of the Authority;
- (g) that the Licensee shall take all reasonable measures to prevent a communication or information which the Licensee and employees and agents of the Licensee and users of all or any part of the Service are not authorised to receive from being received by means of the Apparatus;
- (h) that, if any such communication or information as is referred to in subparagraph (g) is so received, the Licensee shall not, and shall endeavour to ensure that employees and agents of the Licensee of the Service do not -
 - (i) make known its contents, origin, destination or existence or the fact of such receipt, to a person (other than the Minister or the Authority or both or a member of the staff of the Minister or the Authority or both); or
 - (ii) reproduce it in writing or otherwise copy it or make use of it;
- (i) that the Licensee shall ensure that the installation, maintenance and operation of the Apparatus is such, and is effected or carried on in such manner, as to ensure that the safety of persons or property is not endangered and that the use of the Apparatus does not interfere with any other apparatus for radiocommunications the subject of a licence under Part VI of the Act;
- (j) that the Licensee shall ensure that the erection and positioning of Apparatus consisting of antennae and support structures for antennae is effected in accordance with law;
- (k) the Licensee shall, if requested and subject to reasonable terms, provide co-location or other forms of facility sharing, including duct, building or mast sharing;
- (l) that the Licensee shall ensure that non-ionising radiation emissions from each radio installation associated with such mobile telephone network as the Licensee may operate for the purposes of all or any part of the Service are within the limits specified by the guidelines published by the International Commission for Non-Ionising Radiation Protection (“ICNIRP”) and that it complies with any radiation emission standards

adopted and published from time to time by ICNIRP, any standards of the European Committee for Electrotechnical Standards and any standards specified by the European Union;

- (m) that the Licensee shall ensure that access to the Apparatus is restricted to the Licensee, employees or agents of the Licensee and persons authorised by or on behalf of the Licensee to have such access;
- (n) that, at the request of the Licensee, the Minister may, if he considers it appropriate so to do and after consultation with the Authority, amend this Licence by adding to, deleting from or altering the radio frequency channels specified in the Third Schedule. Any such amendment shall be effected by a notice in writing from the Authority specifying the amendment and given to the Licensee or sent to the Licensee at the address specified in this Licence or notified to the Minister and the Authority under subparagraph (o);
- (o) that if the address of the Licensee changes, the Licensee shall, as soon as possible, notify the Minister and the Authority in writing of the change;
- (p) that the Minister may for the purpose of conserving the radio frequency spectrum, impose further conditions (which may be restrictions) as to the installation, maintenance or use of apparatus for electronic communications and such conditions may apply to all or any part of the Apparatus or to apparatus which is of a particular type or description.
- (q) that this Licence shall be deemed to be issued subject to all and any such further conditions of the nature referred to in subparagraph (p) as may be imposed by the Minister under that subparagraph; and
- (r) The equipment shall not be used to provide a publically available mobile telephone network until the installation has been approved following a site inspection.

Variation, suspension and revocation

8. The Minister may vary, suspend or revoke this Licence in accordance with the provisions of regulations 9 and 10 of the Communications (Authorisation and Licensing) Regulations 2006.

Fees

- 9.

- (1) The fees that must be paid by the Licensee for this Licence are set out in Direction M0X/2014“Direction Concerning Fees for Certain Part VI Licences”.
- (2) If this Licence is varied, suspended or revoked, the Licensee shall not be entitled to be repaid any part of the fee paid by the Licensee for this Licence.
- (3) The granting or renewal of this Licence shall not be construed as warranting that this Licence shall be renewed at any time in the future.

Gibraltar XXth XX 20XX

*For the
Gibraltar Regulatory Authority*

FIRST SCHEDULE

Paragraph 3

Places at which the Licensee is authorised by this Licence to keep and have possession of the Apparatus.

Location of BTS

Site Name

Location

SECOND SCHEDULE

Paragraph 2(1)

The Apparatus for radiocommunications to which this Licence applies.

Apparatus for the 2G/3G/4G or IMT/LTE service consisting of the provision of a mobile public telephone network of the type referred to, but not limited to, the standards known as GSM, UMTS, and LTE

THIRD SCHEDULE

Paragraph 7(1)(b)

Radio frequencies on which the Apparatus is authorised by this Licence to be used.

Channel		
Designation	Frequency	Bandwidth