



## **Sure Response to CICRA Document 19/21 5G Spectrum: Draft Statement of Intent**

Sure (Guernsey) Limited and Sure (Jersey) Limited (collectively referred to in this response as “Sure”) is submitting this paper in response to CICRA Document 19/21 “5G Spectrum: Draft Statement of Intent” (“Draft Statement”), which was issued on the 3<sup>rd</sup> May 2019. This is the non-confidential version of Sure’s response.

### **Executive Summary**

We thought it would be helpful to first summarise what we see as the key issues that need to be considered by CICRA, the respective Governments of Guernsey and Jersey and respondents, in relation to the development of 5G services in the Channel Islands, which we then discuss in more detail in our responses to the individual questions. We see four main themes that need to be fully considered:

- Appropriate market structure for 5G

Currently in the Channel Islands there are three separate mobile networks that each offer 2G, 3G and 4G services. That market structure has been very successful in terms of delivering a competitive market, as measured by the range of services available to customers as well as prices that compare favourably to much larger jurisdictions such as the UK, especially when the overall value of packages on offer are taken into account. The natural question therefore is whether that market structure could also work for 5G. However, there is no discussion of this within the Draft Statement and it also seems that the policy stance of both the Guernsey and Jersey Governments is based on a presumption that the market structure for 5G must consist of a single network operator, either one per Bailiwick or one single pan-island network operator. There is no analysis presented to support this view.

- No business case for 5G - as yet

Throughout all the discussions of 5G within the Channel Islands, including at the 5G CICRA Summits held in 2018, it has been universally accepted that there is *currently* no business case for 5G. A major reason for this is that there is currently no need for 5G, given that the three existing networks already provide 4G services to over 95% of the islands’ population and at data speeds that are ever increasing and able to support many of the applications that are expected of Release 15 of 5G. The Channel Islands’ situation is different to that of the UK, not only in terms of coverage being much better here, but also in terms of the lack of the capacity issues that are being faced in the UK, which is a major driver behind the rollout of 5G services in the UK. Sure does expect there to be a business case for 5G at some point, but we don’t expect that to be for at least the next few years.

- Single network as the intended recommendation

CICRA’s proposed Statement of Intent for spectrum allocation is to recommend the award of

5G spectrum (in the 700MHz and 3.4 to 3.8GHz bands) to one operator in Guernsey and one operator in Jersey, which it states could be the same operator, or a consortium of operators. There is no discussion that explains how this recommendation was reached and we believe that there are many questions that need to be fully considered before it can be concluded that this is the appropriate recommendation. For example:

- Should there be a single network for Guernsey and a separate single network for Jersey or should there be a single pan-Channel Islands' network?
  - How does CICRA foresee the network architecture to be operated or shared – for example, mobile sites only or RAN/Sites, or simply as an MVNO-style operation? The proposed structure will be critical to considering the complex technical interactions with the existing mobile networks and the commercial and pricing issues.
  - How will the network(s) coexist and interact with the current three mobile networks, given the 5G network will be complementary to the existing networks?
  - What exactly does CICRA mean by exclusivity? Is it exclusivity over the spectrum itself or does it also extend to the services provided over that spectrum? If the latter, what are 5G services and how will CICRA enforce exclusivity if – as noted above – many of these services can currently be provided over existing 4G networks?
  - How would exclusivity over 5G affect the overall competitiveness of the mobile sector, or the telecoms sector as a whole?
- Potential new operator

The CICRA Draft Statement does not rule out the possibility of a new operator being awarded the 5G spectrum on an exclusive basis - whatever that may mean and entail - and becoming the single 5G network operator either on one of the Bailiwicks only or across both Bailiwicks. This would raise additional questions to those already posed above, including:

- How would a new operator, with no prior presence in the Channel Islands, be able to satisfy CICRA and the respective Governments that it had the necessary technical and operational expertise to operate as the single network operator in the Channel Islands (or part thereof)?
- How would a new operator be able to satisfy the requirements of local and UK Government agencies with respect to the increasingly important security requirements of critical national infrastructure (which the 5G network would become)?
- The introduction of a new operator would result in there being an additional, fourth network operator, as the 5G service could not be operated as a standalone network under the first stage of 5G (Release 15); it would need LTE/4G in addition to 5G NR (New Radio) to provide radio access services. It would be reasonable for the current three mobile network operators to expect that the obligations that they had to meet in order to be awarded their 4G licences would also be applied to this new operator, including with respect to minimum coverage commitments, speeds, etc.

- The possibility of litigation from the existing network operators, especially if a new entrant were to receive any form of grant or subsidy to aid its entry to the Channel Islands that had not been offered to the existing operators

As can be seen from the above, there are many questions that need to be considered by CICRA in relation to 5G. As such, we believe it is both unrealistic and unwise for CICRA and the Governments to expect that it can proceed to issue an Invitation to Tender document in September 2019 – only three months away. Sure questions the rationale for changing the existing market structure of the industry in respect of the latest technology and we would question the ability of CICRA, the respective Governments and industry to make such a radical change over a period of some years, let alone months.

We believe that CICRA needs to pay serious consideration to all the questions raised above. Sure has presented our views on these questions in our detailed responses below and naturally we do not know whether the other operators will be raising similar or additional questions.

Therefore, rather than proceed with the process as defined in the Draft Statement we would suggest that CICRA needs to take a step back and give proper consideration to these questions. One way in which meaningful progress could be made could be through hosting a series of detailed workshops with the current operators. Some of these could involve all operators together whilst for others it may be more appropriate for CICRA to speak to the operators on an individual basis. Sure would certainly be more than happy to participate in these workshops. Since 2017 Sure has continually recommended that the most efficient way to progress was a tri-lateral engagement between CICRA, respective governments and incumbents. It is disappointing that this suggestion has not been progressed especially given the difficulties that have been faced through expecting all of the mobile network operators to unanimously agree a way forward, which was always at best naïve.

**Question 1: What '5G services' foresee could be delivered through this allocation of spectrum? What economic and social benefits will these bring to the Channel Islands?**

Sure believes that questions about the economic and social benefits of 5G services are best addressed by the respective Governments of Guernsey and Jersey and their relevant agencies (including CICRA), rather than the operators themselves. We would expect such questions to have been considered as part of the discussions leading up to the formation of the underlying policy positions of the Governments, which should also have identified the outcomes that they expect and want to be delivered by 5G. We recognise that these outcomes and policy positions differ between the respective Bailiwicks, and this is likely to have an impact on what the optimal network model will be, including whether that is likely to be a single network on each island or a single pan-island network, or indeed whether there should be multiple networks.

Barclays and O<sub>2</sub> have both suggested that the UK economy could benefit by £15bn and £17bn respectively. However, it would be dangerous to apply the same logic to the Channel Islands economies given the vast differences. For example, the UK government in its 5G strategy update listed the importance of enabling 5G for roads and train routes, highlighting the importance of 5G to enabling commuting and work on the move. Clearly these benefits are smaller proportionately to the Channel Islands. Therefore, it is important that both the States of Guernsey and Jersey be clear about the anticipated economic and social benefits to their jurisdictions as these will be different to other countries, so that operators can facilitate the desired outcomes.

The question of what the optimal network model should be is such a fundamental question that we were surprised and disappointed that the Draft Statement does not include any discussion by CICRA of the pros and cons in terms of the potential competitive outcome under different network scenarios. This could have prompted some informed and constructive arguments – and counterarguments - from respondents. We note that the draft recommendation contained within section 5 states that CICRA intends to recommend to Ofcom that 5G spectrum will be awarded to one operator in Jersey and one operator in Guernsey, which may be the same operator or a consortium. But there is no discussion of why CICRA intends to make this recommendation, how it proposes to present the different possible variants and how this proposed approach would work with the existing and successful industry structure of multiple competitive mobile network operators. In the absence of this, we have tried to outline in our responses below what we see as the main considerations, including the relative costs and benefits, of the different possible scenarios. It would appear that CICRA expects the mobile network operators to provide the answer to a question that has not been asked nor, in fact, answered anywhere in the world.

In terms of the 5G services that could be delivered through the allocation of spectrum, CICRA will already have many materials from the 5G summit that was held in October 2018. However, we thought it would be helpful to summarise what could be expected during the different phases of the evolution of 5G.

The initial phase of 5G will be associated with Release 15 - the first full set of standalone radio 5G standards, which was first released in December 2017<sup>1</sup> then further deployed throughout 2018. Initial network deployments have started in the UK this year and can be expected to accelerate throughout 2020. In this initial phase, 5G will represent the opportunity to deliver an enhanced mobile broadband experience, which will be similar to 4G but with faster speeds and potentially lower latencies. This will be an evolutionary stage whereby 5G should support a much better customer experience through the ability to provide a more consistent quality, including in congested areas where there may be a high number of devices connected to the network (including for example, smart meters, fitness trackers, intelligent household devices, vehicle diagnostics, etc. - the so-called "Internet of Things" or IoT).

Applications will include:

- **Fixed Wireless Substitute for Broadband** providing speeds initially of up to 2Gbps. 5G is capable of providing a fibre-like service as a substitute. This could be particularly valuable in more remote locations where neither fibre nor xDSL is viable.
- **4K-UHD and 8K very high-resolution video**, both in downlink streaming to improve viewing quality, but also uplink for professional applications such as real-time image analysis from high resolution cameras, for detecting abnormalities in a manufacturing setting or for public safety purposes;
- **360° wireless virtual reality**, either mobile or in those environments that are not conducive to a fixed connection, for a range of uses such as games, education, professional training and tourism;

**It should be noted that 4G is capable of supporting these services with speeds of over 400 Mbps being available on Sure's 4G network in Guernsey.** Sure expects that such speeds will only increase over time. However, 5G enables usage to become more pervasive by having five to ten times more capacity than 4G services.

Additionally, these types of mobile services are not in high demand today in Guernsey nor Jersey. While we do anticipate demand for mobile bandwidth to increase, we do not foresee in the medium term a scenario that could not be continued to be supported by 4G.

Some new services requiring additional bandwidth are coming to market. For example, Google will launch its new Stadia gaming service this year which will require 35 Mbps download speeds to deliver 4K-UHD. Most customers would use this service at home on a large screen and not on the mobile network. However, for those that did want to continue to play the Stadia games on their mobile devices Sure's 4G network would be more than capable of delivering a great customer experience.

Despite the advent of new services, which require higher bandwidth, it is highly likely that through competition and continued trends 5G will not increase operator's revenues or ARPU

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<sup>1</sup> [www.3gpp.org/release-15](http://www.3gpp.org/release-15)

as customers will expect the faster networks at today's or lower prices. Indeed, as each generation of technology has been implemented, particularly 3G and 4G introductions, operator revenue and ARPU has declined as customers use OTT applications rather than traditional telecoms services.

In summary, there is currently no clear business case for Sure to deploy 5G services until demand exceeds the capacity provided by the 4G network, which with further investment can continue to support higher bandwidth use cases.

Pricing for 5G services will likely be the same as for 4G and 3G data services. However, in Sure's case this would be based on the assumption that the network model would be where Sure would manage all generations of the networks. It may be that if 5G spectrum is awarded to only one operator that Sure's costs would rise and therefore Sure would need to price differentiate for 3G/4G versus 5G services. This could lead to both a disincentive to the uptake of 5G and also a poor experience for customers who are unlikely to know when they are using 4G or 5G services.

The next phase of 5G, associated with Release 16, is expected to be more revolutionary as it will facilitate new applications and services, especially those that rely on an instant response that the low latency of 5G Release 16 will support. In terms of services launch, this phase is expected to start around 2022 (although the 3gpp standards are expected during 2020) and will help to deliver a wide range of remote operations, thanks to low latency and the use of very high accuracy video images.

Applications will include:

- **health applications** including connected ambulance, remote patient monitoring;
- **finance** operations including the ability of finance organisations to rebase their backend processes and customer facing operations to benefit from 10 to 100 times more devices providing real-time information;
- **unmanned-aerial-systems (UAS) applications**—drones for short-range surveillance, assisted maintenance, disaster recovery and commercial photographs or videos;
- recovering data from the multitude of **smart city sensors, smart campus/university**, for instance, to monitor traffic and various pollution levels.

Looking further ahead to 2024 and beyond, applications for 5G are expected to become increasingly revolutionary and will include:

- **high speed, low latency connectivity between vehicles** and transport infrastructure, and vehicle-to-vehicle, or for in-car entertainment applications;
- **remote monitoring, operation and reconfiguration of manufacturing machines and robotised production chains** that can be quickly and easily reconfigured without having to install cables;

- **remote surgery and medical training** – for example, the use of haptic technology that allows users to experience the sensation of touch when remotely using and controlling a connected device. This could be used by medical students to practise surgery in a safe, virtual reality environment.

The figure below summarises some of the evolutionary and revolutionary applications of 5G and their likely timeframe:

Types	Key use cases	Example applications	Market maturity horizon	Likely monetization models		
				B2C	B2B2C	B2B
ENHANCED MOBILE BROAD-BAND	Fixed wireless access 	Fixed wireless access as a substitute for fixed broadband connectivity	●	✓		
		Smart helmets	●	✓	✓	✓
	5G hot spots EMBB boost 	Cloud gaming	●	✓	✓	
		Streaming and live broadcasting HD video <sup>1</sup>	●	✓	✓	✓
		Cloud office /storage	●			✓
	Virtual and augmented reality 	Cloud AR/VR	●			✓
		Interactive AR/VR gaming	●	✓	✓	
In vehicle infotainment 	HD streaming	●			✓	
	Video conferencing	●			✓	
	Gaming	●			✓	
IOT AND MISSION-CRITICAL CONTROL	Autonomous vehicles 	Aided driving	●	✓	✓	
		Platooning	●		✓	✓
		Autonomous driving	●	✓	✓	
	Drone applications 	Field mission, e.g., agriculture, industry outdoor	●			✓
		Safety & emergency interventions	●			✓
	Tactile internet 	Logistics (delivery)	●			✓
		Remote surgery	●			✓
Industry 4.0 applications 	Security / natural disaster interventions	●			✓	
	Cloud based wireless robot control in manufacturing	●			✓	

● Short term, 2020  
● 2020-25  
● 2025+

Sure therefore believes there is no doubt that future releases of 5G will offer up some transformational technologies, enabling network slicing for specific vertical industries. This will facilitate many more commercial applications of the mobile technology, as laid out above, including transport, medical and augmented virtual reality solutions. However:

1. specific business cases, especially for small markets such as Guernsey and Jersey either do not exist or are very immature; and
2. the challenge will come in terms of how to successfully commercialise these network slices, especially in the sub-scale environment of the Channel Islands.

Traditional mobile revenue models essentially accommodate the sale of three commodities; voice minutes, SMS messages and data. The issue will be whether there will be enough external commercial interest in extremely low latency or dense networks to support the sale of the new applications that can be supported by 5G. The commercial burden of this overhead might not be best met through retail tariffs on the traditional user base.

**Question 2: In what timescale do respondents believe these services and benefits can be delivered?**

As indicated above, we expect the enhanced mobile broadband experience of 5G in terms of faster speeds and lower latencies to arise on launch, which according to CICRA’s proposed timescale will be from 2020. However, the extent to which this will materialise will largely be dependent on the availability of 5G compatible devices. We note that the GSMA has recently reported<sup>2</sup> that 5G handset availability within Europe will still be only around 30% by 2025. This begs the question of how any operator will be able to recoup its extensive investments within a reasonable timescale, especially in small jurisdictions such as the Channel Islands, which will also have implications for any period of exclusivity of spectrum that may be required, as we discuss further in response to question 9 below.

There is also little existing demand for faster mobile services; Sure’s 4G network is more than ample to support all demands from our customers. Unlike home broadband, there is a limit to what most customers use in terms of bandwidth from their mobile devices. For example, streaming an HD movie on a mobile requires around 5Mbps.

Unlike the UK and other large developed economies, the Channel Islands is not suffering from mobile data congestion in highly populated urban areas. This is the main driver for UK operators launching 5G services – that is, they need the capacity to fulfil high demand in congested towns and cities.

We would expect the more revolutionary services and applications that can be supported by Release 16 to be delivered from around 2022 but as noted above, the challenge will be whether there will be a commercial model that will support that delivery, especially in a sub-scale environment.

**Question 3: Are there any potential opportunities for existing or new operators to partner with government(s) to enhance the economic value of the 5G network or to better meet the policy ambitions in either or both jurisdictions?**

Sure has continued to engage with the States of Guernsey and the States of Jersey in terms of their aspirations for the development of their respective digital visions. This is particularly the case in Guernsey where Sure is the incumbent network operator and provider of critical national infrastructure (CNI). As far as the States of Guernsey is concerned, Sure has engaged with successive committees over the course of more than one house of Government and discussed innovative investment models to accelerate Government policy in terms of broadband requirements. Sure has stressed the importance to develop such models on a bilateral basis (and with CICRA). Most recently, to address the desire to expedite a 5G network and to reflect stated intentions to contribute funding, this has included proposals for “Network Guernsey” consisting of a commitment to deliver a shared network platform for other operators ensuring retail competition, agreed timelines for deployment, defined government services, joint party technology and product development and addressing Security and CNI.

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<sup>2</sup> The Mobile Economy 2019, GSMA

There are several ways in which the respective States could help to facilitate the rollout of the 5G network investments, including a more flexible planning process, Site rent discounts and availability, discounted energy, unconditional access to Government-owned ducts and poles. Business models for healthcare, smart city, autonomous cars must be debated, understood and eventually (partially) supported by the States/taxpayers/society.

Sure is very alarmed by the reference to new operators in this question. As we discuss below, including in response to question 8, the prospect of another operator with a network monopoly entering markets that already have three mobile network operators<sup>3</sup> that have yet to recoup their 4G investments, would:

1. threaten the sustainability of the sector leading to reduced investment from existing operators through any period of uncertainty;
2. result in challenges that would threaten the timescale for the intended rollout of 5G;
3. question respective Government's actual commitment to the support of inbound investment across all industries; and
4. ultimately lead to, in the medium and longer term, a degradation of the now superior (to the UK) levels of telecoms services in the Channel Islands.

If there is any Government funding available, then it should be offered to the existing operators albeit with strict conditions attached to the use of those funds.

Before a new operator approach is progressed, and indeed for any single network configuration, CICRA must through this consultation address the following fundamental questions:

1. How does CICRA plan to enable integration of and co-existence with existing mobile network infrastructure and services?
2. Will such an operating model be technology based or service based?
3. How will current network operators be prevented from building 5G equivalent services (per Release 16) on the basis of existing licences?
4. How will existing operators be compensated for the changes made to the operating model leading to the loss of value of completed mobile network investments if operators are prevented from using existing network infrastructure to compete?
5. How will existing operators be compensated for increased costs required to integrate with the monopoly network provider?
6. How would the introduction of a fourth network operator be consistent with the stated policy aim of reducing the number of network operators?

**Question 4: Respondents are asked to consider the most appropriate means for the allocation of 5G spectrum for the Channel Islands – an auction, a comparative selection process ('beauty parade') or alternative method.**

Sure is aware that an auction process for the allocation of 5G spectrum has been followed in the UK and also in some parts of Europe. The scale of these markets and the number of

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competing networks mean that an auction process is the most economically efficient way in which to allocate spectrum. This is not the case, however, in sub-scale markets such as the Channel Islands, where we do not believe that an auction process is a suitable means of allocation of 5G spectrum in the same way that it was not suitable for the allocation of 4G spectrum. There are already significant challenges to the business case for 5G in these markets where the substantial costs need to be recovered over a much smaller customer base than is available to operators in larger markets such as the UK. Allocating spectrum by making it available to the highest bidder would only add to those costs, further impacting the viability of the business case. If an auction were introduced Sure would be forced to pass on the increased costs to the consumer by way of higher pricing.

Sure therefore agrees with CICRA's view that a comparative selection process is a more appropriate method of allocating this spectrum in the Channel Islands. Given the importance of 5G to the broader economy and to the future of telecommunications, only trusted operators who have experience and a track record of delivering telecoms operations in the Channel Islands should be invited to this process. To allocate 5G spectrum to a new entrant, with all of the technical complexity involved and with it being the future of telecommunications would represent a huge risk to the sustainability of the industry and the high-quality of the existing infrastructure in the Channel Islands.

There are already three separate mobile networks in Guernsey and Jersey, which support 2G, 3G and 4G services and these will need to co-exist with any future 5G network. With the exception of the 900MHz band where there are some minor differences in individual allocations, all three operators now hold equal amounts of spectrum for the purposes of providing these services and no operator has a competitive advantage derived from holding proportionately more spectrum than the other two operators. Therefore, we do not believe that CICRA will need to contemplate the use of overall spectrum caps as Ofcom has done in the UK as a result of the unequal existing spectrum holdings of the UK operators.

Should CICRA proceed with a single network operator model of some form, then whichever operator(s) is successful in acquiring 5G spectrum in the Channel Islands will, we assume, be subject to specific obligations that will ensure that they will be required to support retail competition for the uses of that spectrum. We discuss further the types of obligations that may be required in response to Question 11.

**Question 5: Respondents are asked what spectrum allocation would be necessary and in what bands for an operator to offer the services and provide the benefits described in Question 1.**

CICRA has stated that it has a total of 80MHz of spectrum available in the 700MHz frequency band and a total of 120MHz of spectrum in the 3.6 - 3.8GHz band, which is additional to the spectrum already allocated or available in the 3.4 – 3.6GHz band. However, we cannot reconcile CICRA's statement about the spectrum available in the 3.4 to 3.8GHz band with what is shown in Ofcom's Channel Islands' spectrum allocation table dated May 2019. We would therefore welcome CICRA's clarification.

An operator will need frequency in both these bands in order to deliver an acceptable 5G

experience. Frequency within the 700MHz band will be required in order to provide wide area and deep indoor coverage, whilst frequency within the 3.4 – 3.8GHz band will offer the best compromise between capacity and coverage.

We note that Ofcom and other European regulators are also looking at the allocation of spectrum in other frequency bands, most notably above 24GHz. This is often referred to as the millimetre wave, or mmWave, and will offer ultra-high capacity and very low latency. Given the limitations of cell radius at these frequencies it is unlikely that they will form part of initial 5G deployments in the Channel Islands but will most likely be used for small cell developments in the future. Similarly, although other bands such as 32GHz, 37-43.5GHz or 66-71GHz are being considered in Europe they will not be required in the initial phases of 5G deployment in the Bailiwick of Guernsey or Jersey. Nonetheless, we would welcome CICRA clarifying its intentions with respect to these bands and especially the 24GHz band as it is seen as an essential for delivering the fastest 5G speeds.

The GSMA has stated<sup>4</sup> that to ensure the optimal delivery of 5G service, operators will need 80 to 100MHz of contiguous spectrum in the “prime 5G mid-bands” (3.4 – 3.8GHz) as well as 1GHz within the mmWave bands.

Given the above and noting that the Draft Statement is only concerned with spectrum within the 700MHz and 3.4 to 3.8MHz bands, Sure’s view is that the key spectrum band for 5G services will be in the 3.4GHz to 3.8GHz band and if allocated and implemented strategically to up to three operators could offer the Channel Islands significant advantages over mainland UK operators. To provide outstanding 5G services in the Channel Islands with sufficient capacity and speeds of up to 1Gbps, a minimum of 100MHz TDD<sup>5</sup> bandwidth would be highly desirable for a network operator in the 3.4 to 3.8GHz range. This would be complemented by a good proportion of the available 80MHz bandwidth of FDD spectrum in the 700MHz band that would provide improved propagation for longer distances and permit some indoor penetration.

As a more general point relating to spectrum, we are concerned that CICRA does seem to lack an overall spectrum strategy for the Channel Islands. For example, we note that it is currently also consulting on the possible allocation of spectrum in the 1800MHz band to 5<sup>th</sup> Dimension. We would suggest that given the strategic importance of the current discussions on 5G that CICRA should place a moratorium on any spectrum allocations until such time that this current process is concluded.

**Question 6: Would this demand for spectrum vary depending on whether there were single or multiple networks developed in future (for example, at the end of any exclusivity period), or as technologies develop in future?**

Currently Sure operates 2G/3G/4G services with three operators in place. For the 3.4 to 3.8GHz band (subject to CICRA confirming the total amount available as per our question above) and 5G we would foresee no impact on whether there were 1 or up to 3 operators.

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<sup>4</sup> See [www.gsma.com/spectrum/5g-spectrum-guide](http://www.gsma.com/spectrum/5g-spectrum-guide)

<sup>5</sup> TDD spectrum does not require a separate downlink and uplink

This is based on the earlier provided fact that Sure's customer base demand for data does not exceed the supply in terms of spectrum-based capacity.

Spectrum demand in the 3.4 to 3.8GHz and 700MHz bands will be important in the early development of 5G services and as compatible devices increase in popularity and bandwidth demands increase, utilisation of both these bands will become under strain. Limiting the number of 5G networks to no more than three that have access to these key frequency bands will play a significant role in ensuring that customer expectations for 5G are met. In the 26GHz band much larger frequency allocations are expected to be available however due to the propagation limitations referred to in Question 5 these bands are likely to be less desirable in initial 5G deployments.

5G is currently very much in its infancy and as the technology develops, we will certainly observe significant improvements in spectral efficiency, however these enhancements will be counter balanced by continually increasing customer bandwidth requirements.

**Question 7: Does this Draft Statement of Intent support and align with the policies of the States of Jersey and Guernsey? If not, what alternative approach could CICRA take to implement government policies?**

Sure notes that the Draft Statement includes a summary of what CICRA understands to be the latest policy positions of the respective Governments with respect to 5G, namely the Future of Telecoms Strategy published by the States of Guernsey in July 2018, and the States of Jersey commissioned Oxera Report "Telecoms Strategy for Jersey" published in December 2017, and it is to these two strategy papers that we mainly refer to below. However, we also note that Sure – and we understand JT and Airtel – have recently received a letter from the States of Guernsey regarding its current policy position towards 5G, although we do not believe that this letter has been made publicly available. We have not received anything similar from the States of Jersey and so we are less clear of the States of Jersey's current 5G policy position. Whilst the letter from the States of Guernsey refers to discussion between officers of Guernsey and Jersey on potential areas of collaboration, we understand that the States of Jersey's objectives for 5G are likely to differ from those of the States of Guernsey. This is presumably what CICRA is alluding to when it states that the final Statement of Intent may differ between the two jurisdictions.

**States of Guernsey's Policy position**

The Future of Telecoms Strategy paper covers a number of areas in addition to 5G. For the purposes of this response Sure will limit the scope to just the 5G elements covered in the paper, although rightful consideration must be given to the underlying core infrastructure required to deliver a ubiquitous and equitable single 5G network.

The strategy document delivered six key recommendations, three of which relate directly to 5G:

- Government will support a 5G testbed and will, subject to business cases from telecommunications companies, work with CICRA to release spectrum on a

temporary basis for 5G testing.

- Next generation mobile will challenge the traditional investment models and Government will work with CICRA and the Telecommunications companies to develop the most effective network sharing architecture.
- Government will develop a range of support for the early development of the most effective 5G networks sharing model through a range of measures from planning policy, availability of spectrum through to commercial use of States assets and capital investment.

Further, the States of Guernsey also expressed a desire for Guernsey to have 5G available at the same time or before the UK. With EE having launched in six cities in May 2019 and Vodafone expected to launch very shortly, this is no longer possible. However, Sure would expect UK operators to take many years to reach the kind of coverage that, for example, Guernsey has with respect to 4G (which is superior to the UK). Therefore, if the ambition were to be refined in terms of Guernsey catching up with and exceeding the UK, this could still be achievable.

Taking these points in turn, Sure welcomes Government's acknowledgment that spectrum will be required for testing of 5G technology, a point that was demonstrated when Sure successfully applied for a limited period of testing during September 2018.

As strategy turns to policy there needs to be an element of realism around the point of Guernsey becoming a technological testbed for largescale global developments such as the coming generations of 5G as well as future evolutions of communications technology. Whilst a small, closed, user group should appear attractive to technology companies, Guernsey remains a sub-scale jurisdiction that lacks the lobbying capacity that larger jurisdictions and regions have when attracting technology partners to a region. For this vision to become a reality there needs to be a much more concerted and external effort by industry, the regulator and Government, acting with a single voice in attracting external interest and investment to our islands, for the concept of a testbed to be realised. Commercial 5G networks have already been launched around the world after extensive testing in closed user groups, including just recently in the UK where mobile operators have already started to make 5G technology available on a commercial basis to their customers.

Sure recognises the significant challenge that the race to 5G places on traditional investment models. The evolution cycle between technologies is being foreshortened by a desire to leapfrog other jurisdictions and technologies with a quick 5G rollout. Investment cycles between technology evolution cycles were twelve years between the introduction of 3G as an enhancement to 2G, and eleven years between 3G and 4G/LTE. 4G has been commercially available in Guernsey for only five years, half of the return period of prior generations of mobile evolution. The preference of the States of Guernsey for a 5G rollout as an enhancement to fixed broadband services through Release 15 of 5G standards, prior to the ratification of enhanced technology developed for Release 16 of the 5G standards, dictates that investment cycles will be approximately halved when compared to previous generations.

Sure expects that spectrum will be made available to fulfil Government policy and also

expects that the resource of spectrum is treated carefully and allocated with the future in mind. In order to achieve the economic and societal benefits that future releases of 5G promise, spectrum has to be maximised, which may point towards allocation being made through a single operator.

Similarly, Sure expects that obtaining planning permission for any additional infrastructure that will be required to fulfil any future policy that dictates a ubiquitous 5G network would be a straightforward and quick process. The innovative solution that States' assets could be used in the building of this new network is welcomed and should be explored further during the award process.

In relation to capital investment by the States of Guernsey in this infrastructure, Sure has engaged with successive committees over the course of more than one house of Government on innovative investment models to accelerate Government policy. For clarity during the award process it would be very helpful if the States of Guernsey elaborated on its intentions, and ability, to invest in projects relating to national communications infrastructure.

### **States of Jersey's Policy Position**

The States of Jersey's commissioned Oxera Report "Telecoms Strategy for Jersey" published in December 2017 set out Jersey's policy objectives and supporting strategic vision in relation to the development of its telecommunications infrastructure, with two key policy principals having particular relevance to 5G:

**Policy principle 1** – Promote the path to next generation connectivity building on the current advanced digital infrastructure already in place, including by:

- Being a fast adopter of next generation technologies that have been tested.
- Incentivising mobile network sharing and rollout of mobile next generation technologies such as 5G.
- Minimising legal and regulatory barriers for use as Jersey for a test bed.
- The adoption of principals to incentivise mast sharing.

**Policy principle 2** – Promote retail competition (not network competition) as the most effective way of delivering the benefits of next generation connectivity to consumers and businesses, including by:

- Ensuring fair and reasonable non—discriminatory access to the gigabit fibre network for mobile backhaul.

These two policy principles provide what Sure believe is a clear framework to develop a supporting framework to deliver the key objectives, but several other related areas also need to be considered in conjunction:

- 1) Timing – Does Jersey wish to be an early adopter of a relatively untried or fully commercially tested new technology?

- 2) Commercial viability – The consensus is that there is still a question mark over the commercial viability of building and deploying 5G networks now. That is, there is still not a viable business case. It is clear from a Jersey perspective that there is no government funding to support the acceleration of any 5G deployments, so every operator will have to consider their positions in terms of both timing and viability.

On the face of it, it appears that both Bailiwick’s policy positions support the same end goal – namely a single wholesale network as the best and most efficient way to ensure a ubiquitous and equitable 5G delivery in both islands.

However, this is questionable given the high-quality service provided by the existing three operators with separate networks where investment, competition and regulation has driven a positive outcome. This then leads to the question of whether a single network is the appropriate approach and if so, what the mechanisms are to ensure the existing high quality service is at least maintained. In our response to Question 8 we discuss both the options for how a single network could be “shared” and the options for the multi-operator model.

**Question 8: Respondents are asked to comment on the issue of spectrum initially only to one operator in Jersey and one operator in Guernsey, which may be the same operator.**

Sure is concerned that there has been no discussion by CICRA of the pros and cons of this approach but would note that such an approach is a complete reversal of the past 15 years of policy and practice and to change now will effectively require unpicking the success of that history.

CICRA – and the respective Governments of Guernsey and Jersey – will need to consider a number of issues here, not least of which is the fact that there are currently three independent mobile network operators – Airtel, JT and Sure - in each Bailiwick. This has been very successful in terms of encouraging competition resulting in world class coverage and speed for all consumers across Guernsey and Jersey. However, all are yet to recoup their investments from the rollout of 4G. To now try to adopt a single operator model will have significant inefficiency costs and implications.

Combined with the sub-scale nature of the Channel Islands it would be counterproductive for CICRA to consider encouraging a fourth operator to enter as it would further increase the challenges of maintaining sustainable competition within the Channel Islands. We would also seriously question the merit of encouraging a new operator, which would have no experience of building a network within the Channel Islands, to enter the market. In addition, this would damage the long and significant investments made by the mobile network operators and the incremental value generated by the associated infrastructure and organisational costs. In short, such a move would permanently damage the business that has taken decades to build. Not least, the requirement of a new entrant for additional infrastructure such as masts would naturally raise environmental concerns as well as possibly leading to further vocalisation of concerns in relation to potential health issues of 5G.

Sure is therefore firmly of the view that any issue of spectrum associated with 5G services

should be open only to the existing three network operators who currently supply services to customers across both Bailiwicks, not least because otherwise there could be serious impacts to their ongoing viability, which they would need to protect. If through commercial imperatives operators are aligned with respect to network sharing and if this is the extent of a single network for very defined services, CICRA can ensure that retail competition can be protected through ensuring that any 5G spectrum award/operating licence includes appropriate conditions with respect to wholesale access to that network.

Broadly there are two main factors which CICRA should consider in respect of awarding spectrum to only one operator:

- The type of operating network model for sharing the spectrum
- The options for managing and operating the network(s)

### **1. Operating Network Model**

There are a number of ways for a single operator to allow other operators to benefit from the spectrum for which under all types of sharing scenarios, it has the exclusive rights. Some of these are laid out in the table below as a non-exhaustive illustration of the possible complexities and implications:

Type	Description	Pros	Cons
Sites & Backhaul	5G Operator (5GO) provides sites and backhaul, with RAN / Core / Billing provided by other operators (OLO)	Minimises number of mobile masts / sites Gives OLO full flexibility to manage network and integrate with current offering Provides jurisdiction with alternative 5G providers, working with the same physical infrastructure – better than relying on a sole operator	5GO holds too much control as would effectively play regulator role in allocating spectrum to OLOs  Selecting and building sites to handle multiple RAN networks is costly and complex
RAN & Backhaul	5GO provides RAN & Backhaul, with OLO providing 5G Core and Billing	As above plus: Reduces Capex and Opex investment in RAN for all operators	Interoperability with existing networks, 5G would be capable of only data services, link to 4G
RAN, Backhaul & Core	5GO provides all three services, with OLO Billing	As above plus further reduces Capex and Opex funding	As above plus: Further technical limitations for interoperability Overreliance on 5GO – with no 5G technical operations OLO would not have 5G experience or skills – limiting remedies if 5GO does not perform
MVNO	5GO could feasibly provide all services including billing and customer support allowing OLO to focus on sales and marketing	Single 5GO specialises and deploys network	Reduction in scope for differentiated retail competition. Likely to take years to fix if quality of single operator network is poor

In the States of Guernsey’s Future of Telecoms policy three options are discussed in terms of their pros and cons. It states “A single, resilient 5G network that provides boundless connectivity can meet the needs of the Island. A far greater level of network sharing, a new single 5G network or a RAN sharing would meet this requirement. Government will support the regulator in developing the model for the delivery of the most cost effective 5G network that builds competition at all levels, not just the network level, to the advantage of the consumer. CICRA will advise on what legislative and regulatory action is required.” Sure believes that CICRA therefore needs to determine, working with the industry and Government, which of these models – if any - it should pursue in order to meet the desired policy outcome.

### **Technical considerations & interoperability**

Sure does not yet fully understand the complex technical model for operating both a 5G offering to customers alongside 2G/3G/4G networks in any of the above models where there is a 5GO and OLO. Each approach will need to be carefully examined by CICRA and operators to establish whether these approaches are even technically feasible. For example, a 5G customer will rely on 2G or 3G for Voice and SMS services whereas 5G signalling currently relies on 4G. Therefore, the operators will need to find a solution for a customer switching from a 5G data session to a 2G/3G voice call seamlessly. The inherent technical risk being a dropped call as the handover is managed or simply customers being unable to make or receive calls when using 5G data. A simple service-based definition (for example, the 5GO will **only** provide mobile broadband services) would not be sustainable in the long run, would be inefficient operationally, as well as confusing for customers.

The risk to the customer experience should not be underestimated. Many operators initially have issues with the interoperability of the latest generation technology and this occurs even when all of the network is managed by a single operator. If the 5G network is to be shared there will be a significantly increased risk to guaranteeing a high level of service to the customer. This again puts at risk the high quality of service currently being delivered for 2G/3G/4G services in the Channel Islands.

### **Commercial considerations**

As outlined in section 1 there may be a scenario where the costs of 5G to an OLO are higher for 5G than other 4G/3G services and therefore retail pricing would need to be adjusted. This would lead to differentiated pricing for 5G and 4G/3G services. In turn this will lead to customer experience issues whereby customers would need to understand whether they were using 5G or other mobile data services. Additionally, it may mean that customers are effectively disincentivised to use 5G by both the combination of higher pricing and the OLO pushing 4G/3G services which would be at a higher gross margin.

These scenarios all require careful consideration for how the 5GO will price access and usage to the 5G network to OLOs and how this mechanism will be regulated by CICRA given its inherent risk in terms of a single supplier. In theory one operator should be in a position to provide 5G at a lower cost than multiple individual operators, however with a monopoly the 5GO could be inefficient and increase prices.

## **2. Options for managing and operating the network**

Once the type of network sharing has been identified and the technical feasibility assessed there are a number of options for the management of the network.

- Option 1: multiple separate networks on each island, competing at network and retail level

It may be that there is no feasible or practical model for allocating spectrum to a single operator and therefore the only likely option would be a continuation of the current successful structure and would be supported by the existing operators who have worked through 2G, 3G and 4G. The difference is with the scale required for the next release and

depending on timing, this option could result in a sub-optimal customer experience as each network would require its own allocation of the defined 5G spectrum available. Further, it could represent duplication given the high levels of investment that will be required for each network. This option would likely, however, lead to already progressed discussions regarding network sharing. In other words, a hybrid of the options laid out in the previous section could evolve as a practical and workable solution without the need to allocate spectrum to only one operator.

- Option 2: Two separate wholesale 5G networks in Guernsey and Jersey, both owned by the same operator.

This option would involve two separate wholesale networks being built, one on Guernsey and one on Jersey, but under the ownership of the same operator. The issue would be which operator that should be, which could be complicated by the different ownership status of the current three network operators. With JT being under public ownership whilst Sure and Airtel are both privately owned, the requirements for that investment are different.

One of the major disadvantages of this model would be that with one operator being responsible for the 5G network across both islands, there would be a single point of failure. This compares to the current situation where with three separate networks any major network failure by one operator can be readily dealt with due to the ability to reroute traffic via the other operators, using existing “mutual aid” agreements.

- Option 3: Single wholesale 5G operator building out a pan-island network

This option could help to address the sub-scale issues of having to build out a separate network in Guernsey and Jersey but again the issue of having a single point of failure would exist, if not be compounded under this option – if the network fails in any island it is likely to have impacts across the whole of the Channel Islands.

- Option 4: Sure as the single wholesale 5G network operator in Guernsey and JT as the single wholesale 5G network operator in Jersey

This option would involve the respective “incumbent” network operator in each island being awarded the spectrum necessary to build a single wholesale 5G network on their respective islands. Having two separate networks operated by two independent operators would overcome the potential risks of having a single point of failure. Further, the need to have reciprocal access to each other’s networks would give incentives to provide access on fair and reasonable terms, which could then be extended to the third operator and any other licensed operators on appropriate MVNO terms. This reflects the current fixed and broadband network approach across both Bailiwicks and it could be envisaged that a similar regulated commercial model could be established. This option may be the most attractive economically and operationally, but further analysis is required based on detailed bilateral technical and commercial discussions.

- Option 5: consortium of existing operators operating a neutral network across both islands (either as two separate networks or a single pan-island network)

This option would entail all three existing operators forming a consortium to provide a single 5G wholesale network, or a single, separate network on each island. Whilst this could be an appealing option, it would take additional time to agree the terms under which the consortium would operate (assets, management, ownership, control), which would have implications for the overall timescale for implementation and launch of services. Of particular concern would be the different shareholder class of each of the operators and associated control requirements.

- Option 6: new entity operating a wholesale network across both islands (either as two separate networks or a single pan-island network)

As explained above, Sure does not believe this option should be contemplated by either Government. It could seriously threaten the ongoing viability of the existing networks and further put at risk the sustainability of effective competition. We would therefore anticipate that any serious pursuit of this option would be likely to result in one or more legal challenges by the existing mobile network operators, which apart from the cost implications for all concerned would seriously affect the timescale for delivery of 5G in the Channel Islands. It could also affect the Channel Islands' ability to attract further investment as it could appear that the Governments are content to undermine the significant investments that have already been undertaken.

Notwithstanding the economic impact of a fourth operator on diminishing returns, the customer experience for a retail customer of the 5GO would be extremely limited. Assuming the 5GO would launch only 5G services then it would only be existing providers that could fulfil voice and SMS services. 5GO customers would need to rely on VOIP applications such as Skype to make and receive calls and would be unable to receive or send SMS.

**Question 9: What period of exclusivity would be sufficient to ensure a fair return on investment for a single operator before the remaining spectrum became available for allocation?**

There is currently not enough information regarding equipment, costs, operating models, number of sites, or supporting infrastructure required to be able to form a business case to be able to determine what this period of exclusivity should be.

We do however agree that a period of exclusivity is appropriate and should be based on the principle of a fair return. However, there are important questions that CICRA needs to consider in terms of what exactly it means by exclusivity and how it will be enforced, which we discuss further below.

At this stage, our best estimates are that a period of exclusivity of 10 years would be required for release 15 of 5G, whilst this could be significantly longer for Release 16 depending on the vertical applications and the likely customer take up of these applications.

**Release 15 and Release 16 – timing of exclusivity and award**

Given that the standards for Release 16 and the demand from the Channel Islands or business models are also yet to be established then it seems that CICRA would have to base its award

for 5G spectrum to an operator(s) based on its approach to Release 15. Given that Release 16 is a build on Release 15 it then follows that the 5GO would have a “lock in” to provide Release 16 5G services and thereby requiring a long period of exclusivity. CICRA may therefore need to consider whether spectrum should be withheld to ensure the Channel Islands could have a second 5GO in case the primary does not deliver or to allow more operators for the advent of Release 16.

We note CICRA’s reference to “remaining” spectrum and so are unclear as to whether this means that any spectrum that is initially allocated under an exclusive basis will be less than the maximum amount of spectrum available. Or does CICRA expect that more spectrum suitable for 5G services will become available in the future?

As noted above, we would also question what CICRA actually means when it talks about exclusivity. Being the only recipient of a certain frequency of spectrum may not in itself be sufficient to ensure that the operator is the exclusive provider of the services that are expected to be made available through 5G. This is especially true in the early years where 5G services are more evolutionary than revolutionary and increasing advances in existing technologies – such as 4G+ - mean that operators will be able to deliver a vastly enhanced mobile broadband service using their current spectrum allocations. What would CICRA’s intention be here? Would it prevent operators from providing any services that competed directly with those provided by the operator with exclusive rights over the 5G spectrum? Has it considered the implications of this where the operator(s) is providing those services over spectrum that it has been allocated and which could be critical to achieving a return on previous investments, such as 4G? It does raise the possibility of legal challenge if operators believe they are being prevented by CICRA from using their allocated spectrum resource to provide services that fall within the parameters of their spectrum licences. This is especially pertinent given the technology neutral status of most spectrum licences.

**Question 10: Respondents are asked to consider the types of conditions which would be necessary to encourage the development of retail competition during the rollout of 5G services.**

The answer to this question will to some extent depend on what final model CICRA decides to proceed with. For alignment with the respective States’ policies it would seem that some form of single network model is envisaged but as noted in response to question 8 there are a number of variants to this model and as such, the types of conditions that may be desirable or necessary will also vary depending on CICRA’s final decision.

In general, however, the types of conditions that will foster retail competition in addition to the technical elements should relate to ubiquity and equitability of the single network architecture. For a single wholesale network offering to be viable it needs to be treated and designed as critical national infrastructure. The network will need to provide good coverage of the Bailiwick(s) to both ensure the maximum societal benefit from the move to a single network and also to avoid ‘cherry picking’ the most lucrative (or populous) areas for 5G deployment. To foster the most amount of retail competition and enable entry for innovative retail users of the network, access must be equitable. The most obvious way of doing this is through a tightly regulated wholesale product that ensures that charges for use of the

network are fair and consistent across all retail operators; a suggestion of regulated return on employed capital could work in this scenario. If done correctly this could lead to numerous niche and innovative retail operators all making the maximum use of the underlying network resources.

**Question 11: Respondents are asked to consider the types of conditions which would be necessary to protect consumers and ensuring the most efficient use of spectrum as a scarce resource.**

As Sure has stated in its previous responses, the most efficient use of spectrum would appear to be achieved through a single network model, the most feasible variant of which is likely to be a separate network being built and operated by the respective incumbent operator in each island.

The commitments that would need to be considered should include the following:

- **coverage commitments (landmass and population)**, given the large investments needed it would seem desirable to consider phasing of coverage obligations, which should be focused on specific locations. However, as the ultimate aim is to achieve ubiquity and equitability of coverage, it will be important for CICRA to specify milestones by which coverage to other areas should be achieved. In terms of indoor coverage, if there are to be specific obligations for this they need to be carefully considered, especially given that current fixed and 4G broadband services already provide extensive indoor coverage. At the very least, any 5G indoor coverage obligations should be delayed until several years after initial award of licence.
- **Coverage to satisfy verticals' needs** – if the single network operator has the correct incentives to provide customised services for verticals then that will avoid the need for CICRA to “set-aside” spectrum for verticals, which can result in inefficient spectrum use. (The GSMA has noted<sup>6</sup> that one way to incentivise operators is to allow them to lease their spectrum assets so that verticals can build their own private 5G networks)
- **Minimum standards for quality of service** including speed at peak periods and latency
- **Customer experience – interoperability** is key to ensuring a seamless experience between 2G/3G/4G and 5G. – see section 1 of our response to question 8 for a fuller explanation.
- Availability of both **prepaid and postpaid options**.
- Ability to make **self-service** available – that is, does not necessarily require human intervention in a retail or call centre for customers to add, remove or make changes to their 5G services.
- **Roaming** – we would question whether a specific obligation with respect to roaming is needed, given that it will be in the commercial interests of operators to provide this. However, this may be dependent on whether ultimately there is a single 5G network operator, in which case there would seem to be a need for that network to support roaming. In any event, we would particularly caution against CICRA including any obligations on roaming that are linked to EU rates that may not be achievable by Channel Islands' operators. As CICRA will recall, this was the case with the 4G roaming

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<sup>6</sup> 5G Spectrum, GSMA Public Policy Position, November 2018

obligation where operators had to delay offering 4G roaming services linked to EU rates as otherwise they would have been making losses in their provision of such services.

- **Use it or Lose it conditions attached to frequency use** given that large allocations of 5G spectrum will be needed for the best possible customer experience it will be important that CICRA (and Ofcom as the body responsible for issuing spectrum licences) includes an explicit condition that states that spectrum must be used within a certain timeframe or be returned.
- **Mobile network sharing** – this will be dependent on the type of sharing that is adopted – please refer to the response to question 8 above.
- **Environmental, energy and health & safety issues** as with current licence, all operators need to commit to abiding by the relevant international standards.

In addition, we note that CICRA has included within section 6.2 relating to possible Licence Conditions, reference to compliance with UK National Cyber Security Centre (NCSC) guidance. Sure procures services and solutions through strict procurement processes which includes requirements for compliance with recognised security standards and industry guidance. Sure is very conscious of security requirements and liaises on a regular basis with the NCSC, our vendors and UK operators. Given the increasing importance of these requirements it is therefore all the more important that any operator that is provided with spectrum in the Channel Islands is already fully engaged with and aware of the responsibilities surrounding critical network infrastructure security.

We are also very conscious that, as yet, the UK Government Department of Culture, Media and Sport has not made a definitive statement with respect to the use of foreign network vendors) within 5G networks.

CICRA and the States of Guernsey and the States of Jersey cannot continue much further with this process until there is clarity on the UK Government's position, which will naturally have to be taken into account by the States of Guernsey and the States of Jersey.

The current unclear position in relation to foreign investment in CNI is a cause of concern, with clarity sought at the earliest opportunity. We encourage CICRA to clearly state any conditions to be applied to Channel Island operators with due consideration of proportionality and risk for our jurisdictions.

**Question 12: What are the environmental and planning considerations which CICRA should take into account when considering spectrum allocation? This may include respondent views on the number of any additional sites which may be required in each Island.**

In the initial phases of 5G it is expected that existing base station locations will be used however it is inevitable that some additional base sites will be required to meet increasing demands in the future. Small cells are likely to play a key role in 5G networks, especially longer term when high frequency bands are used. Increasing small cell density also limits the transmit power of mobile cells and devices, reducing Health and Safety concerns. In order to facilitate implementation of small cells it would be highly desirable to have government assistance in areas such as:

- Fast-track planning permissions
- Unconditional access to street furniture
- Discounted rent and/or energy on sites upgraded to 5G

Sure recognises the need to preserve and maintain our Island home and will continue to comply with any applicable planning laws and regulations. Sure is also happy to assist Government in any considerations to planning laws and regulations that may conflict or enhance intentions set out in the telecoms policy.

**Question 13: What are the health and safety consideration which CICRA should take into account when considering spectrum allocation? This may include respondent views on reassurance to the public.**

The States of Guernsey and the States of Jersey must take the lead with full disclosure regarding the increasing public debate as without strong leadership and an agreed public resolution the political damage will be significant. If the States of Guernsey and the States of Jersey are not willing to do this at present, then the alternative of waiting until there are sufficient deployments across the world and significant 5G handset penetration (post 2022) would be supportable on a public safety basis.

Sure believes that CICRA should be required to ensure that the operators adhere to the accepted standards with respect to mast emissions, etc., which they currently monitor through their regular mast surveys.

**Question 14: Are there any other considerations which CICRA should take into account in order to maximize the economic benefits which can be achieved through the allocation of this spectrum? Are their additional ways in which economic and social benefits could be maximized, perhaps through partnerships with government to stimulate additional growth or bring down costs for consumers?**

**Guernsey**

One additional area that should be considered in an award of this importance is the contribution and commitment to the local economy and community, a point that can easily be overlooked in Government tendering processes.

**Release 16**

As presented and discussed in the CICRA 5G Summits, the potential for the technology accruing from Release 16 means that Sure would recommend that a process is formed whereby Government, Business and the local telecoms operators form working groups to establish the desired outcome for the Channel Islands. Given the technology's broad nature it will require all parties to come together to establish a clear vision for certain verticals such as "smart society", eHealth and Education.

Submitted on behalf of:

**Sure (Guernsey) Limited and Sure (Jersey) Limited**

14<sup>th</sup> June 2019