



SPC Network

Report for CICRA

**Wholesale Broadband Access Market Review:
Market Definition and SMP Assessment**

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SPC Network
Chapel House
Booton
Norwich NR10 4PE
United Kingdom

Tel +44 1603 871162
www.spcnetwork.eu



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About SPC Network

SPC Network was founded in 2003 and has worked for over 30 clients worldwide. We undertake Strategic Policy Development for clients in platform and networked industries, by combining the knowledge of our consultants with specific and valuable skills to ensure rigorous analysis and exceptional advice. Our core consultancy team and network of partners have substantial experience in industry and consulting and so we understand the practical issues and challenges facing the market. Through advanced academic training, we have developed the key skills and rigorous approach needed to support our clients win the policy debate.

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1 EXECUTIVE SUMMARY

Introduction

The Channel Islands Competition and Regulation Authority (CICRA) is conducting a review of regulation of the wholesale broadband access market and has asked SPC Network to conduct an independent assessment of the market with two objectives:

- i) To define the relevant product and geographic markets, and
- ii) To assess whether any operator holds a position of Significant Market Power (SMP) on the market(s).

We have been asked to take account of the process of market definition and assessment of SMP used by the European Union, even though neither Guernsey nor Jersey are Member States, but to do so in a way that is proportionate and pragmatic given the size of the Bailiwicks.

All views expressed in this report are those of SPC Network and not necessarily of CICRA.

Market Definition

A “relevant market” is defined to set boundaries for competition analysis and is the first step in the assessment of SMP or dominance. Generally speaking, products can be regarded as belonging to the same relevant market if they have similar characteristics and/or are used for the same purpose by consumers, even if their physical characteristics are very different.

Where such similarity is not obvious, the well know Hypothetical Monopolist Test (HMT) is normally used to determine whether products belong in the same market. The HMT assess whether a small but significant non-transitory increase in price (SSNIP) would be profitable in the light of potential demand or supply side substitution.

Geographic markets are generally defined on the basis of competitive conditions. A single geographic market consists of areas with homogeneous competitive characteristics. In electronic communications, the coverage of the network and the existence of legal or regulatory instruments are also used to define geographic markets.

Assessing SMP

The market share of the leading firm is usually the starting point for an assessment of SMP. Where a market share is above 50%, this is often taken as evidence of dominance



in its own right. However, such dominance may be overcome if barriers to entry and expansion are low and if there is strong countervailing buyer power.

Guernsey and Jersey are separate geographic markets

The two Bailiwicks each have separate incumbent fixed network operators (Sure and JT respectively) and are separate legal jurisdictions. On this basis we consider them to be two separate geographic markets and have assessed them independently.

Guernsey – Market Definition

Broadband access is provided by three means of fixed landline: ADSL, VDSL and a small amount of fibre to the premises (FttP) being built by JT in the St. Peter Port area. We take the view that these three technologies have sufficiently similar characteristics and are used for sufficiently similar purposes by consumers that they belong to the same relevant market. This view is also taken by the European Commission for EU markets.

The three mobile operators – Airtel-Vodafone, JT and Sure - provide a form of fixed access over their fourth generation (4G) networks using a router in the customer premises through which desktop computers and other devices can access broadband. We understand that this service appeals to a particular demographic and take the view that for this group, at least, fixed 4G services belong to the same market as the landline services on the basis that it is used for the same purpose.

We have assessed whether broadband access using a mobile device such as a handset is also in the same market. We conclude that it is not on the basis of its mobile functionality, price and monthly data allowance. We conclude that a SSNIP imposed on fixed access would be profitable as users would not switch to mobile.

We have also assessed whether the area covered by JT's developing FttP network forms a separate geographic sub-market. JT's subscriber numbers are too low to make any competitive impact at present. However, we conclude that its limited ambition and the fact that even once complete there will only be two networks in the area mean that this area cannot be considered to be a separate geographic market.

We conclude that the appropriate market definition in Guernsey is:

“Wholesale access to the Internet at a fixed location using an access network based on local loops that are either exclusively or partially based on the copper or fibre access network or using the 4G and ultimately 5G wireless access network via a fixed device in the whole Bailiwick of Guernsey”.



Guernsey – assessment of market power

Based on the market definition above and on data provided to us by CICRA, we find that Sure has a market share of 93% of subscriber lines. This is well above the 50% at which dominance is presumed. We have found no evidence of low barriers to entry or expansion and no countervailing buyer power.

We therefore conclude that Sure has SMP on the market.

Jersey – Market Definition

Broadband access is provided by two means of fixed landline: FttP and cable TV networks upgraded to DOCSIS 3.0. We take the view that these technologies have sufficiently similar characteristics and are used for sufficiently similar purposes by consumers that they belong to the same relevant market. This view is also taken by the European Commission for EU markets.

As is the case on Guernsey, the three mobile operators – Airtel-Vodafone, JT and Sure - provide a form of fixed access over their fourth generation (4G) networks using a router in the customer premises through which desktop computers and other devices can access broadband. Again, this service appeals to a particular demographic and take the view that for this group, at least, fixed 4G services belong to the same market as the landline services on the basis that it is used for the same purpose.

We have assessed whether broadband access using a mobile device such as a handset is also in the same market. We conclude that it is not on the basis of its mobile functionality, price and monthly data allowance. We conclude that a SSNIP imposed on fixed access would be profitable as users would not switch to mobile.

We understand that the Homenet cable network serves States provided housing across the Bailiwick. We do not consider, therefore, that it would provide a competitive constraint in any particular area of the island and thus would not create any variance in competitive conditions. On this basis, we conclude there is a single geographic market covering the whole Bailiwick of Jersey.

We conclude that the appropriate market definition in Jersey is:

“Wholesale access to the Internet at a fixed location using an access network based on fibre or cable or using the 4G and ultimately 5G wireless access network via a fixed device in the whole Bailiwick of Jersey”.



Jersey – assessment of market power

Based on the market definition above and on data provided to us by CICRA, we find that JT has a market share of 88% of subscriber lines. This is well above the 50% at which dominance is presumed. We have found no evidence of low barriers to entry or expansion and no countervailing buyer power.

We therefore conclude that JT has SMP on the market.



2 INTRODUCTION

The Channel Islands Competition and Regulatory Authorities (CICRA) issued a consultation document on the economic regulation of the wholesale broadband market in May 2018¹ (the Consultation Document). This set out a number of proposals for how to impose regulation in such a manner that it would improve market outcomes for consumers. The consultation period closed on 15th June 2018.

CICRA has asked SPC Network to undertake an independent analysis of the wholesale broadband markets on the Channel Islands with two objectives:

- i) To define the relevant product and geographic markets, and
- ii) To assess whether any operator holds a position of Significant Market Power (SMP) in any market.

SPC Network has not been asked to consider what remedies should be imposed on any operator that enjoys SMP, which were included in the Consultation Document.

Although the Channel Islands are not members of the European Union (EU), the Consultation Document indicates that the EU regulatory framework is regarded as Best Practice². The competition laws of Guernsey and Jersey also make specific reference to an obligation on CICRA and the courts to take account of EU laws and precedents³. We have therefore been asked to be consistent with, or at least take account of, the process adopted by the EU when defining markets and assessing SMP. However, we have also been asked to be proportionate, bearing in mind the size and structure of the markets in the Channel Islands compared with EU Member States. We have therefore taken a pragmatic approach when implementing the EU process.

In drafting this report we have conducted interviews with key stakeholders from whom we have received valuable input. We are grateful to these stakeholders and to CICRA for their input. All views expressed in this report are those of SPC Network Ltd and not necessarily those of CICRA.

¹ CICRA 'Future Economic Regulation of the Broadband Market: Consultation Document' 4 May 2018.

² Ibid Para. 4.6.

³ See Article 54 of the Competition (Guernsey) Ordinance 2012 and Article 60 of Competition Law (Jersey) 2005.



3 THE MARKET REVIEW PROCESS

3.1 The Regulatory Approach to Market Analysis

The market review process is well established in the EU and is set out in the most recent set of Guidelines published by the European Commission on the assessment of Significant Market Power (“The Guidelines”)⁴. Although the Channel Islands are not members of the EU, the process set out in The Guidelines is broadly accepted as a best in class benchmark and have been adopted by National Regulatory Authorities (NRAs) around the world. We therefore consider that they can be used within the Channel Islands as a tried and trusted process. We understand that previous reviews have not followed the EU process and have applied regulation to Sure and JT as a whole rather than in specific relevant markets where they have SMP. In this market review we have adopted narrower definitions of relevant markets in line with the EU process.

The overall regulatory approach to market analysis is described in paragraphs 13 - 23 of The Guidelines. It requires that the starting point for the identification of wholesale markets is to identify the corresponding retail market. NRAs should then determine whether the retail market is prospectively competitive in the absence of wholesale regulation. If retail competition is unlikely to be sustainable without effective regulation of the wholesale market then the NRA should adopt SMP regulations accordingly. However, if retail competition can be sustained without wholesale regulation, then the NRA should conclude that no wholesale regulation is needed. This process is depicted in Figure 1.

Figure 1: Regulatory Approach to Market Analysis



Market reviews for the purposes of *ex ante* regulation are forward looking and should take account of likely developments over the period of the review. Historically, market reviews in the EU have covered a three year period, although that will change to five

⁴ European Commission ‘Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications and services (2018/C 159/01)’ 7 May 2018.



years in Article 65 of the European Electronic Communications Code (EECC)⁵. CICRA's consultation document does not refer to a specific timeframe for the review. For the purpose of this analysis, we have maintained the three year period as the new EECC has not yet come into force.

Once it is determined that wholesale regulation is required then The Guidelines state that the NRA needs to undertake a market definition of the relevant retail and wholesale markets on both product and geographic dimensions. Once the relevant market is defined, the NRA should then assess whether one or more firms have SMP in the relevant market. The process of market definition and SMP assessment are described below.

3.2 Market Definition

The Product Market Definition Process

The first step in any market review is to define the relevant retail market and then the wholesale markets. As the UK Office of Fair Trading (OFT) pointed out in a document now adopted by its successor, the Competition and Markets Authority (CMA):

“Market definition is not an end in itself but a key step in identifying the competitive constraints acting on a supplier of a given product or service. Market definition provides a framework for competition analysis. For example, market shares can be calculated only after the market has been defined and, when considering the potential for new entry, it is necessary to identify the market that might be entered. Market definition is usually the first step in the assessment of market power.”⁶

The CMA and the European Commission both consider that products with similar technical characteristics and/or that are used by consumers for the same purpose would be likely to belong in the same relevant market. The CMA states:

“Where the objective characteristics of products are very similar and their intended uses the same this would be good evidence that the products are close substitutes [but that] products with very different physical characteristics may be close substitutes if, from a customer's point of view, they have a very similar use.”⁷

⁵ Political agreement was reached on the EECC between the European Council and Parliament on 5th June 2018. A final version of the EECC was not available at the time this report was written.

⁶ Office of Fair Trading 'Market Definition' December 2004. Para. 2.1.

⁷ *ibid* Para. 3.7.



The European Commission says:

“NRAs should thus commence the exercise of defining the relevant product or service market by grouping together products or services that are used by consumers for the same purpose (end use).”⁸

The approach outlined by the CMA and European Commission is used to identify the products that belong in the narrow market definition.

The process for defining wider markets, i.e. comprising products with different characteristics that may have different end-uses, begins with the well-established Hypothetical Monopolist Test (HMT). This seeks to determine whether a hypothetical monopolist of the focal product could profitably impose a small but significant non-transitory increase in price (SSNIP) of 5-10% above the competitive level, which in regulated markets is taken to be the regulated price.

A SSNIP would not be profitable if an alternative product existed that provided the same functionality as the focal product such that sufficient consumers would switch to that alternative product (‘demand-side substitution’). It is important to note that the alternative product does not need to be exactly the same as the focal product, but needs to be sufficiently close that customers would use it for the same purpose. When considering the likelihood of such substitutability, The Guidelines require that the NRA should take account of financial and non-financial⁹ switching costs the customer might incur.

Another constraint that could make a SSNIP unprofitable is if an alternative supplier “would switch their line of production in the immediate to short term or offer the relevant products or services without incurring significant additional costs”¹⁰ (‘supply-side substitution’).

The profitability of a SSNIP is central to the HMT and to assess profitability it is important to consider what would happen to sales and costs if such a price rise were to be implemented. A recent judgement by the UK’s Competition Appeal Tribunal (CAT) in a case concerning telecoms services for business made it clear that the assessment of profitability does not need to be quantitative. It accepted that a qualitative analysis

⁸ European Commission op cit. footnote 4 Para. 33.

⁹ Non-financial costs include, for example, learning a new operating process.

¹⁰ The Guidelines, Para. 28.



could be just as relevant as a quantitative analysis, provided that the HMT assesses the likely impact on the profits of the hypothetical monopolist¹¹.

If the SSNIP is unprofitable, the alternative product is added to the focal product market and the HMT run again with a different alternative product until a SSNIP could be imposed profitably due to a lack of substitute products. The relevant market, therefore, is one that a firm would find worth monopolising¹².

On the basis of the statements by the CMA and European Commission referred to above, and on the requirement for us to take a pragmatic and proportionate approach, we do not consider it necessary to undertake a HMT for different forms of wholesale landline broadband access. We consider it self-evident that consumers use all forms of fixed landline access, regardless of the physical characteristics of the technology, for the same purpose: access to the Internet. The HMT is only necessary when there is some doubt as to whether an alternative product would act as an economic constraint on a hypothetical monopolist.

The Role of Self-Supplied Inputs

In electronic communications markets, it is quite often the case that there is not a product supplied on the merchant market (that is by a wholesale provider to an independent retailer). A vertically integrated firm that operates at both the wholesale and retail levels supplies the product either exclusively or, more frequently, predominantly to its own retail business, which then competes with wholesale customers. In this case, The Guidelines state:

“NRAs should consider self-supply on the network for the delineation of markets and construct a notional market encompassing the self-supply, where there is consumer harm at the retail level and potential demand for such a product exists.”¹³

In the broadband access case, an operator such as Sure in Guernsey and JT in Jersey provides the local access service to its own retail division and to other operators who do not have their own access network. “Self-supply” is the provision of access services to itself and access services to other operators are supplied in the “merchant market”.

¹¹ Competition Appeal Tribunal [2017] CAT 24, *British Telecommunications plc. vs. Ofcom* Para. 167 – 171.

¹² Bishop, S., & Walker, M. (2010). *The economics of EC competition law*. Sweet & Maxwell. 4-005.

¹³ The Guidelines, Para. 32.



The product market, therefore, consists of all effective substitute products and includes self-supplied inputs.

The Geographic Market Definition Process

Geographic markets can also be assessed using the HMT. However given the nature of electronic communications networks a more pragmatic approach is usually adopted. The Guidelines point out that:

According to established case-law, the relevant geographic market comprises an area in which the undertakings concerned are involved in the supply and demand of the relevant products or services, in which the conditions of competition are sufficiently homogeneous, and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are significantly different. Areas in which the conditions of competition are heterogeneous do not constitute a uniform market.¹⁴

The Guidelines go on to say:

In the electronic communications sector, the geographical scope of the relevant market has traditionally been determined based on two main criteria:

- (a) the area covered by a network; and*
- (b) the existence of legal and other regulatory instruments.¹⁵*

In the United Kingdom, geographic markets have been defined on a sub-national basis taking account of competitive conditions, as in the Wholesale Broadband Access market, and the area covered by the network¹⁶. In all fixed markets, the UK is divided between the Hull Area and the UK excluding the Hull area to allow for the fact that BT is not present in Hull, where KCOM is the incumbent operator. Both examples are in line with criterion (a) above.

3.3 Three Criteria Test

The European Commission produces a recommended list of markets susceptible to *ex ante* regulation, that is to say markets where it believes conditions are such that *ex ante* regulation is likely to be warranted. To decide which markets should be included on the

¹⁴ The Guidelines Para. 48.

¹⁵ The Guidelines. Para 51.

¹⁶ See, for example, Ofcom (2017) 'Wholesale Broadband Access Market Review: Consultation on market definition, market power determinations and remedies' Section 4.



list, the Commission has developed the “three criteria test”, which assesses various conditions of the market.

The three criteria are:

- i. The presence of high and non-transitory structural, legal or regulatory barriers to entry;
- ii. A market structure which does not tend towards effective competition within the relevant time horizon, having regard to the state of infrastructure-based and other competition behind the barriers to entry;
- iii. Competition law alone is insufficient to adequately address the identified market failure(s).

A market that is subject to high barriers to entry, not tending towards effective competition and where competition law is insufficient to resolve any problems is deemed to be susceptible to *ex ante* regulation although this does not necessarily mean that any firm has SMP in the market, which must be assessed separately.

NRAs are expected to conduct the three criteria test after the market is defined. However, it is not necessary for an NRA to carry out the test for markets included in the list of recommended markets, although they may wish to do so given national circumstances¹⁷. The wholesale broadband access market discussed in this report is in the list of markets recommended by the Commission, although it is referred to there as the wholesale central access market¹⁸. Nevertheless we do conduct a three criteria test for circumstances in the Channel Islands.

3.4 Assessing SMP

Once the market is defined, the next stage is to determine whether any firm, singly or jointly, holds a position of SMP, which is equivalent to a dominant position, defined in the EU as “*a position of economic strength affording [the firm] the power to behave to an appreciable extent independently of competitors, customers and consumers*”¹⁹.

¹⁷ European Commission ‘Explanatory Note Accompanying the document Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation’ SWD(2014). Page 11.

¹⁸ The staff working document accompanying the Recommendation refers to the wholesale central access market as “access products are typically provided to the access seekers at a higher and more central layer in the network architecture, and can be used to provide best-effort retail services to both residential and non-residential customers” (European Commission ‘Explanatory Note Accompanying the document Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation’ SWD(2014) 298. Page 46).

¹⁹ The Guidelines. Para. 52.



The Competition Ordinance in Guernsey and Competition Law in Jersey²⁰ do not contain definitions of a dominant position. However, CICRA defines a dominant position in a manner that is very similar to that used by the EU. According to CICRA a dominant position is one that allows a firm to:

“...increase prices above the competitive level, or decrease quality, without making that move unprofitable. It can also use its market power to engage in anticompetitive conduct and exclude or deter competitors from the market.”²¹

The assessment of whether an operator enjoys SMP normally starts with the market share of the leading firm. A very large market share – in excess of 50% - is taken as evidence of SMP in itself, except in special circumstances. This is particularly the case if the operator has enjoyed such a high market share over a long period of time.

Where the market share is below the 50% threshold, but still high, say above 40%, NRAs are expected to examine a number of other factors that may preclude the firm from acting independently of competitors, customers and consumers. The various factors are listed in Para. 58 of The Guidelines:

- barriers to entry,
- barriers to expansion,
- absolute and relative size of the undertaking,
- control of infrastructure not easily duplicated,
- technological and commercial advantages or superiority,
- absence of or low countervailing buying power,
- easy or privileged access to capital markets/financial resources,
- product/services diversification (for example, bundled products or services),
- economies of scale,
- economies of scope,
- direct and indirect network effects,
- vertical integration,
- a highly developed distribution and sales network,
- conclusion of long-term and sustainable access agreements,
- engagement in contractual relations with other market players that could lead to market foreclosure, and/or
- absence of potential competition.

CICRA’s guidelines on abuse of a dominant position make reference to the 50% threshold at which dominance is presumed and also state that it considers that a firm with a

²⁰ Op cit. Footnote 3.

²¹ CICRA ‘Guidelines 5 – Abuse of a Dominant Position’ December 2012, Page 9.



market share of less than 40% is unlikely to be dominant²². These guidelines also refer to three broad types of constraint that could act affect a dominant position: existing competitors, potential competitors and strong buyer power²³.

3.5 Our Approach to Market Definition and Assessing SMP

In this report we will follow the approach to market definition and SMP as set out in The Guidelines, in CICRA's guidelines on abuse of a dominant position and the documents produced by the OFT and now adopted by the CMA in the UK. As explained above, we do not consider it necessary to conduct a formal HMT for the different forms of fixed broadband access as they are all used by consumers for the same purpose.

We have conducted the analysis separately for Guernsey and Jersey, which we consider to be separate geographic markets, for reasons explained in the next section of this report.

²² Ibid Page 11.

²³ Ibid Page 10.



4 THE CHANNEL ISLANDS AS TWO GEOGRAPHIC MARKETS

The Channel Islands are an archipelago consisting of the Bailiwicks of Guernsey and Jersey. The former includes the islands of Alderney, Sark and Herm, each of which has some degree of self-governance. Jersey and Guernsey each have their own parliaments (States) and separate governments. Historically, the two islands have had separate “incumbent” telecoms operators (Sure and Jersey Telecoms (JT) respectively) that were and are independent economic entities. Today, each of the two companies has operations on both islands.

It is our view that the historic positions of Sure and JT mean that even today the market conditions differ sufficiently between the two Bailiwicks such that each Bailiwick can be considered a separate geographic market.

The Guidelines explain that geographic markets have “*been determined based on two main criteria:*

- (a) the area covered by a network; and*
- (b) the existence of legal and other regulatory instruments.”*

Without prejudice to any later finding of SMP, the largest network on each island that provides the majority of wholesale access is owned by separate companies and so the networks of Sure and JT cover different areas, fulfilling the first criterion above.

This is analogous to the situation in the UK where Ofcom has identified the Hull and East Yorkshire area to be a separate geographic market to the rest of the UK for fixed services based on the areas covered by the different networks: KCOM and BT respectively.

Each Bailiwick is a separate political entity and so subject to different legal and other regulatory instruments, fulfilling the second criterion.

It is our view, therefore, that each of Guernsey and Jersey represent different geographic markets. However, this does not preclude the finding of further geographic sub-markets within each Bailiwick. In the analysis below each Bailiwick is considered separately.



5 GUERNSEY

5.1 General Market Description

The principal broadband access technologies on Guernsey are Asynchronous Digital Subscriber Line (ADSL) and Very high bit rate Digital Subscriber Line (VDSL), collectively referred to as xDSL. ADSL is based on a copper line all the way from the local telephone exchange to the customer premises. VDSL uses fibre to a street cabinet and a final copper connection to the customer premises and is sometimes referred to as Fibre to the Cabinet (FttC). ADSL offers speeds of up to 24Mbit/s and VDSL can offer speeds between 50Mbit/s and 300Mbit/s²⁴. The majority of broadband connections on Guernsey are on ADSL as shown in Figure 2 below.

Figure 2: Broadband Connection by Technology - Guernsey

Technology	Connections	Proportion
ADSL	19,560	81.6%
VDSL	4,441	18.4%
Total	23,971	100%

Source: Sure, CICRA

JT is building a Fibre to the Premises (FttP) access network on Guernsey, which initially connected schools and other government buildings and is now being trialled in a number of residential areas. The ultimate goal is to provide FttP connections to around one quarter of residential customers in and around St. Peter Port²⁵, which itself accounts for approx. 30% of Guernsey's population.

We understand there is no cable television network capable of delivering broadband access on Guernsey. The mobile operators (Sure, JT and Airtel-Vodafone) provide both fixed and mobile broadband access. The former uses a router located in the customer's premises to which devices such as desktop and tablet computers are connected and the latter uses a mobile device, such as a handset or tablet computer.

At present the mobile operators use both third and fourth generation access technology. We understand that fifth generation access will become available within the period of this review.

²⁴ At the time of writing the highest download speed offered by Sure on Guernsey was 100Mbit/s.

²⁵ <https://www.jtglobal.com/Guernsey/Personal/Broadband/JT-Fibre-is-Coming/Fibre-guernsey/The-Project-Plan/>.



5.2 Retail Product Market Definition

Product market definition begins with the retail market and then considers supporting wholesale products, including those that are self-supplied.

The majority of broadband access in Guernsey is delivered over either ADSL or VDSL. As these technologies have objectively similar characteristics and are used for the same purpose we consider that they belong in the same relevant market. We also consider that FttP has sufficiently similar characteristics to xDSL, and is used for the same purpose (to access to the Internet), that it should be included in the same relevant market. From a user perspective the principal difference between the technologies is access speed.

In this view we are supported by the European Commission's explanatory note to its recommendation on relevant markets, which makes no distinction between copper and fibre-based access. We have also been unable to find any examples of EU Member States that have defined separate markets for copper and fibre access. We are not aware of any fundamental differences between the way in which FttP will be provided in Guernsey and in other countries that would lead to a different conclusion in Guernsey than elsewhere.

4G Access

The three mobile operators on Guernsey provide fixed and mobile broadband access. The fixed service uses 4G technology and the mobile service uses both 4G and 3G. We consider each type separately.

Fixed services are based on a router located in the customer premises to which devices in the home connect over a Local Area Network (LAN) in the same way as they would connect to a router on a landline network. The router can be moved to an alternative location but, as it relies on mains power, is not mobile in the same way as a handset. Typical access speeds are comparable with ADSL.

The fixed service offers the same user functionality as a landline service (access to the Internet), though the precise applications for which it is used may be different. Our discussions with operators suggest that these services are more likely to be used for browsing, email and voice/messaging services rather than for watching video content and are used by more price sensitive customers as well as seasonal workers or new arrivals on the island living in temporary accommodation whilst they find a permanent home.



For this group of customers, we consider that a fixed 4G service has sufficiently similar product characteristics that it should be considered to be in the same relevant market as landline services and therefore belongs in the core market definition²⁶.

We turn now to mobile 4G broadband access via a user's handset or other portable device such as a tablet computer. We consider that the mobility functionality is sufficiently different from fixed 4G and landline access that further analysis is needed to determine whether it is in the same relevant market.

4G is widely available across the Bailiwick, but there is a variation between indoor and outdoor coverage. Whilst nearly all of Guernsey is covered outdoors, features such as building materials²⁷, tree cover, other physical objects and weather conditions as well as how many other people are using the network may affect the quality of service and the speed obtained. Thus a user of the mobile functionality cannot guarantee consistent quality of service and may occasionally lose access. The proportion of the island that has good indoor coverage is likely to be less than has good outdoor coverage.

To be an effective substitute, 4G mobile needs to provide consistent coverage across the Bailiwick, both indoors and outdoors. Whilst a user of fixed 4G either would or would not be able to receive a signal in a specific location, and so would or would not buy the service, a user seeking to benefit from the mobility functionality of 4G would be expected to require consistent coverage if it is to act as a substitute for a fixed service. Inconsistent service means that mobile 4G cannot be relied upon for access across the whole the island.

Further, whilst many mobile handsets have a "hotspot" facility that allows users to connect another device to the Internet via the handset, this is typically used occasionally and in specific circumstances, such as in a coffee shop with no free WiFi, rather than as a main access method in a fixed location. Inconsistent coverage means the hotspot facility may not be available everywhere.

We also see that the prices of mobile operators' plans via a mobile handset are different to that of a fixed service. Figure 3 below shows a comparison with fixed 4G service which is the closest substitute amongst the fixed services. Whilst a fixed 4G service typically costs £17.50 - £18.99 per month for a 100GB of data, the price of a mobile data plan is more variable, as illustrated in.

²⁶ For reasons discussed below, the quality of 4G coverage is not consistent across the island and so may not meet customer requirements in some households. We would expect this to be reflected in the take-up levels of fixed 4G access.

²⁷ We understand that many houses on Guernsey and Jersey are built from granite, which is likely to have detrimental affect on the ability of radio waves to penetrate walls.



Figure 3: Mobile Operators Data Price Plans - Guernsey

	Price Per month (GB£)	Data allowance (GB)
Airtel-Vodafone	19.99	20
JT	20.00*	25
Sure	20.00	10**

* In addition to a £20 monthly charge for voice and messaging services

** Unlimited for first three months of contract

Source: Company websites

A SSNIP imposed on a typical 4G fixed access package would bring the price to a comparable level with the mobile package but still leave the user with a data allowance at least four times the size. Given the difference in data allowance and the ability to connect multiple devices via a router it is our view that such a price rise would most likely be profitable as we would expect very few users to change to a mobile 4G service as a result.

The EC's explanatory note to the recommendation on relevant markets notes that third generation (3G) mobile has generally not been found to be in the same market as fixed because *“service reliability and resilience are usually lower, to a degree that makes consumers look at them presently as complements rather than substitutes in most settings”*²⁸.

Subscriber numbers and the experience reported by operators suggest that there is no evidence of mobile 4G being seen by consumers as a substitute for fixed. Data provided by CICRA shows, the number of fixed lines continues to grow whilst the number of mobile subscribers is declining, largely due to a decrease in the number of prepaid customers²⁹.

For these reasons we consider that 4G mobile does not provide a competitive constraint on a hypothetical monopolist of fixed broadband.

Market reviews are forward looking and should take account of potential developments that may affect the market over the period covered by the review. Under the EU's current process this is a three year period.

²⁸ European Commission 'Explanatory Note Accompanying the document Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation' SWD(2014) 298, Page 35.

²⁹ CICRA 'Telecommunications Statistics and Market Report 2017', Figure 25.



Over the period of this review 5G services, which are expected to lead to both a quantitative and qualitative improvement in the speeds and service quality offered over mobile networks, are likely to be launched in Guernsey. We see no reason why a fixed product based on 5G would not remain in the same relevant market. However, the lack of substitution by 4G mobile may have to be reassessed with the launch of 5G services.

As with 4G, the extent of the improvement is likely to vary between urban and rural areas and with intensity of demand within a cell. The take-up of 5G service by consumers and how they will use the service are unknown at this stage. It is also the case the fixed access may also improve over the same period.

We consider, therefore, that it is not possible to determine the extent to which 5G mobile will be a competitive constraint on a hypothetical monopolist of fixed broadband access and therefore are of the view that it should not be included in the relevant product market at this time. However, once the service is launched and its role in the market as substitute or complement becomes clearer, its inclusion in the market definition may need to be revised in future reviews.

Conclusion

From the above analysis, we conclude that the relevant product definition in Guernsey is “retail access to the Internet at a fixed location using an access network based on local loops that are either exclusively or partially based on the copper or fibre access network or using the 4G and ultimately 5G wireless access network via a fixed device”.

5.3 Wholesale Market Definition

As mentioned in the introduction to this report, we have been asked to take a proportionate and pragmatic approach bearing in mind the size and structure of the market. For this reason, we have not repeated the analysis between different forms of wholesale access that we carried out at the retail level. We would not expect there to be any materially different analysis. Instead we make a basic assumption that the same product market definition applies and that all forms of fixed access, including that based on 4G, are effective substitutes.

The wholesale market is therefore defined as: “wholesale access to the Internet at a fixed location using an access network based on local loops that are either exclusively or partially based on the copper or fibre access network or using the 4G and ultimately 5G wireless access network via a fixed device”.



5.4 Geographic Market Definition

We have considered whether the Bailiwick of Guernsey could include sub-national geographic markets based on the presence of JT's fibre network in some of the island and the differences in laws between Guernsey, Alderney and Sark.

With regard to the area covered by JT's fibre network our analysis is necessarily on a forward looking basis as today it is in a trial phase. We consider whether its presence is likely to create competitive conditions that are sufficiently different to the rest of the island of Guernsey that this area should be considered a separate market.

JT currently has a very small number of trial customers on its fibre network and it is not possible for us to predict how successful its service will be. However, given the stated plans for network roll-out to 25% of St. Peter Port its effect is likely to be limited such that we would not expect the competitive conditions in the St. Peter Port area to be changed significantly.

Even if a significant number of customers were to switch to JT fibre, the question arises of whether the presence of just two operators is sufficient to find a separate geographic market based on different competitive conditions.

The UK regulator, Ofcom, has found different geographic markets in the UK wholesale broadband access market, outside the Hull region, based on the number of competitors present in an exchange area. It has set the threshold at which competitive conditions are different as the presence of BT plus two further Principal Operators, defined as Sky, TalkTalk and Virgin Media. So even if JT were able to gain market share rapidly in this area, we do not think it would justify defining a separate geographic market based on the presence of just one additional operator.

With regard to Alderney and Sark, although these are subject to different legal conditions, Sure's network covers both islands and Sure operates a standard pricing policy across the whole Bailiwick of Guernsey³⁰. We therefore do not see any reason to conclude that competitive conditions are any different on Sark and Alderney to define these as separate geographic markets.

We therefore propose a final market definition of "wholesale access to the Internet at a fixed location using an access network based on local loops that are either exclusively or partially based on the copper or fibre access network or using the 4G and ultimately 5G wireless access network via a fixed device, in the whole Bailiwick of Guernsey".

³⁰ Different competitive conditions are often expressed through different prices.



5.5 Three Criteria Test

Having defined the market, the next stage is to undertake a three criteria test to establish if the market as defined is susceptible to *ex ante* regulation. Although this is not a requirement under the EU framework for markets included in the Commission's recommendation on relevant markets, we consider each of these criteria below.

Is the market subject to high and non-transitory barriers to entry? There are very high fixed costs associated with building an alternative network and, we understand, the geology and topography of Guernsey makes this particularly difficult and therefore expensive. JT is only planning to build its fibre network in a limited part of the island. There is also no regulated access to unbundled local loops in Guernsey making it impossible for an entrant to access the market without building its own network. For these reasons we consider that the market is protected by high and non-transitory barriers to entry.

Is the market tending towards effective competition? Sure has a market share in excess of 90% with just a few connections provided by JT's fibre network and a larger share provided by the mobile networks. Whilst this may change in the future, the limited extent of JT's fibre network makes it unlikely that the competition it provides will be effective in the market. We also understand that mobile operators' ability to expand is limited by a number of factors that prevent them extending their market share substantially. These factors include: site costs, power, cost effective on-island backhaul to sites and the cost of off-island backhaul³¹. We therefore conclude that the market is not tending towards effective competition.

Is competition law sufficient to address any competition problems? Competition law is concerned with addressing failures in a market that has been subject to competition *ex post* and not with opening up markets to new entry. It is not therefore sufficient to deal with problems in the wholesale broadband access market in Guernsey to create a competitive retail market.

We note that the European Commission recommends that the wholesale central access market, which is equivalent to the wholesale broadband access market, is susceptible to *ex ante* regulation in EU Member States on the same analysis as above.

³¹ This matter is outside the scope of our review. However, we believe that CICRA should consider whether any regulatory action is required.



We therefore believe that the market as defined is susceptible to *ex ante* regulation and thus the proper subject of a market review.

5.6 SMP Analysis

As noted above in Section 3.3, analysis of SMP begins with an assessment of market shares within the relevant market and that a very high market share, in excess of 50%, is taken as evidence in its own right that the firm has SMP.

Under the market definition proposed above, Sure has a market share of 93%, taking account of both fixed and mobile networks, as shown in Figure 4. This share has changed by only around two percentage points in the past three years. The entry of JT and its investment in fibre access has had a very limited effect so far, and any future effect will be limited by the expectation that its FttP network is only planned to cover about 25% of households in St. Peter Port. We also understand that the ability of mobile networks to extend their market share is affected by the factors mentioned above and so are unlikely to be able to extend market share significantly. Thus the potential for substantial erosion of Sure's market share is limited.

Figure 4: Wholesale Market Shares Guernsey

Combined Wholesale Market Shares			
	2015	2016	2017
Sure	95%	93%	93%
Airtel	2%	4%	4%
JT	3%	3%	3%

Source: CICRA

We therefore consider it unlikely that Sure's share will decline substantially over the period of this review such that it may not be presumed to have SMP. Any such erosion will only occur in the area covered by JT's network and so not affect Sure across the whole Bailiwick. We therefore conclude that Sure has SMP in its market.

Nevertheless, we have considered the factors listed at the end of Section 3.3 above to analyse whether any might place a competitive constraint on Sure. Perhaps the most important of these factors are barriers to entry and expansion and countervailing buyer power.

Access to local network infrastructure is essential for any firm who might wish to enter the broadband market. Sure is in an incumbent position so already has such access. There are significant economic costs for any firm seeking to enter the market to compete with Sure that form high barriers to entry. We note that JT has restricted its planned roll-out of fibre access to one quarter of homes in St Peter Port and is not planning to extend to the whole of the town, let alone the whole Bailiwick. This limited planned build



suggests that there are significant barriers to entry and expansion facing any potential rival.

If firms cannot enter the market, or can only enter on a limited basis, this suggests that the incumbent firm faces little in the way of competitive constraint and so is likely to enjoy a position of SMP. Any buyer in the market has little in the way of countervailing buyer power as it has a restricted choice of supplier and would face the same barriers to entry if it tried to build its own rival network.

We are therefore of the view that Sure does not face any significant competitive constraint that would overcome its large market share and so we consider that Sure is in a position of SMP.



6 JERSEY

6.1 General Market Description

Jersey Telecom (JT) has nearly completed the upgrade to a full fibre network under its “Gigabit Jersey” initiative. By the end of June 2018 all of JT’s broadband connections are expected to be based on FttP³². To all intents and purposes, therefore there is no xDSL broadband access in Jersey.

Homenet is an independent provider of broadband access that uses its own cable TV network to provide broadband access using DOCSIS 3.0³³ in addition to buying wholesale access from JT. Wholesale access from JT accounts for over half of Homenet’s customer base. JT, Sure and Airtel-Vodafone all offer a fixed broadband service using the 4G network for access.

As is the case on Guernsey, the whole island has access to 4G mobile, but again there is variable indoor and outdoor coverage, for the same reasons as noted above. 5G mobile services are expected to be launched within the next two years.

6.2 Retail Market Definition

Retail fixed broadband access is provided using JT’s fibre network and on Homenet’s cable TV network, which has been upgraded to DOCSIS 3.0 to deliver broadband. From the user’s perspective these technologies support the same end use, albeit that FttP can offer higher access speeds.

The UK and many other jurisdictions have found cable and fibre to be in the same relevant market. The European Commission makes no distinction between technologies in its recommendation.

We therefore conclude that both technologies are part of the same relevant market along with any residual copper based access.

³² It would be expected that the copper network will at some point in the future be switched off meaning that any customers who require a phone but not broadband will have that service provided over fibre, almost certainly using some sort of Voice over Internet Protocol (VoIP) system. Whether such a move would have any affect on the broadband market would need to be monitored by CICRA.

³³ Data Over Cable Service Interface Specification is an international telecommunications standard that permits the addition of high-bandwidth data transfer to an existing cable TV system. It is employed by many cable television operators to provide Internet access over their existing hybrid fibre-coaxial infrastructure.



4G Access

The three mobile operators on Jersey provide fixed and mobile broadband access. The fixed service uses 4G technology and the mobile service uses both 4G and 3G. We consider each type separately. The solutions and pricing plans offered on the two Bailiwicks are very similar and thus so too is our analysis.

Fixed services are based on a router located in the customer premises to which devices in the home connect over a Local Area Network (LAN) in the same way as they would connect to a router on a fixed network. Typical access speeds are comparable with ADSL.

The fixed service offers the same user functionality as a landline service (access to the Internet), although the precise applications for which it is used may be different. Our discussions with operators suggest that these services are more likely to be used for browsing, email and voice/messaging services rather than for watching video content and are used by more price sensitive customers as well as seasonal workers or recent arrivals on the island living in temporary accommodation whilst they find a permanent home.

For this group of customers, we consider that a fixed 4G service has sufficiently similar product characteristics that it should be considered to be in the same relevant market as landline services and therefore belongs in the core market definition.

We turn now to mobile 4G broadband access via a user's handset or other portable device such as a tablet computer. Again, we consider that the mobility functionality is sufficiently different from fixed 4G and landline access that further analysis is needed to determine whether it is in the same relevant market.

4G is widely available across the Bailiwick, but there is a variation between indoor and outdoor coverage. Whilst nearly all of Jersey is covered outdoors, features such as building materials³⁴, tree cover, other physical objects and weather conditions as well as how many other people are using the network may affect the quality of service and the speed obtained. Thus a user of mobile functionality cannot guarantee consistent quality of service and may occasionally lose access. The proportion of the island that has good indoor coverage is likely to be less than has good outdoor coverage.

To be an effective substitute, 4G mobile needs to provide consistent coverage across the Bailiwick, both indoors and outdoors. Whilst a user of fixed 4G either would or would

³⁴ We understand that many houses on Guernsey and Jersey are built from granite, which is likely to have detrimental affect on the ability of radio waves to penetrate walls.



not be able to receive a signal in a specific location, and so would or would not buy the service, a user seeking to benefit from the mobility functionality of 4G would be expected to require consistent coverage if it is to act as a substitute for a fixed service. Inconsistent service means that mobile 4G cannot be relied upon for access across the whole the island.

Further, whilst many mobile handsets have a “hotspot” facility that allows users to connect another device to the Internet via the handset, this is typically used occasionally and in specific circumstances, such as in a coffee shop with no free WiFi, rather than as a main access method in a fixed location. Inconsistent coverage means the hotspot facility may not be available everywhere.

We also see that mobile operators price data plans via a mobile handset at a different level from that of a fixed 4G service. Thus, whilst a fixed 4G service typically costs £17.50 - £18.99 per month for a 100GB of data, the price of a mobile data plan is more variable, as illustrated in Figure 5 below.

Figure 5: Mobile Operators Data Price Plans - Jersey

	Price Per month (GB£)	Data allowance (GB)
Airtel-Vodafone	19.99	20
JT	20.00*	25
Sure	20.00	10**

* In addition to a £20 monthly charge for voice and messaging services

**Unlimited for first three months of contract

Source: Company websites

A SSNIP imposed on a typical 4G fixed access package would bring the price to a comparable level with the mobile package but still leave the user with a data allowance at least four times the size. Given the difference in data allowance and the ability to connect multiple devices via a router it is our view that such a price rise would most likely be profitable as we would expect very few users to change to a mobile 4G service as a result.

The EC’s explanatory note to the recommendation on relevant markets notes that third generation (3G) mobile has generally not been found to be in the same market as fixed because “*service reliability and resilience are usually lower, to a degree that makes*



*consumers look at them presently as complements rather than substitutes in most settings*³⁵.

Subscriber numbers and the experience reported by operators suggest that there is no evidence of mobile 4G being seen by consumers as a substitute for fixed. Data provided by CICRA shows, the number of fixed lines continues to grow whilst the number of mobile subscribers is declining, largely due to a decrease in the number of prepaid customers³⁶.

For these reasons we consider that 4G mobile does not provide a competitive constraint on a hypothetical monopolist of fixed broadband.

Market reviews are forward looking and should take account of potential developments that may affect the market over the period covered by the review. Under the EU's current process this is a three year period.

Over the period of this review 5G services, which are expected to lead to both a quantitative and qualitative improvement in the speeds and service quality offered over mobile networks, are likely to be launched in Jersey. We see no reason why a fixed product based on 5G would not remain in the same relevant market. However, the lack of substitution by 4G mobile may have to be reassessed with the launch of 5G services.

As with 4G, the extent of the improvement is likely to vary between urban and rural areas and with intensity of demand within a cell. The take-up of 5G service by consumers and how they will use the service are unknown at this stage. It is also the case the fixed access may also improve over the same period.

We consider, therefore, that it is not possible to determine the extent to which 5G mobile will be a competitive constraint on a hypothetical monopolist of fixed broadband access and therefore are of the view that it should not be included in the relevant product market. However, once the service is launched and its role in the market as substitute or complement becomes clearer, its inclusion in the market definition may need to be revised in future reviews.

³⁵ European Commission 'Explanatory Note Accompanying the document Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation' SWD(2014) 298, Page 35.

³⁶ CICRA 'Telecommunications Statistics and Market Report 2017', Figure 25.



Conclusion

From the above analysis, we conclude that the relevant product definition in Jersey is “retail access to the Internet at a fixed location using an access network based on fibre or cable or using the 4G and ultimately 5G wireless access network via a fixed device”.

6.3 Wholesale Market Definition

We take the same pragmatic and proportionate approach as we did with Guernsey and assume that access technologies at the wholesale level are as substitutable as they are at the retail level. Therefore we presume that fibre, cable and 4G based fixed broadband are in the same relevant market.

6.4 Geographic Market Definition

We have considered whether there could be a sub-geographic market on Jersey where Homenet has its own network. However, we understand that the Homenet network is not confined to a specific geographic location, but rather serves States provided housing across the Bailiwick. We do not consider, therefore, that it would provide a competitive constraint in any particular area of the island and thus would not create any variance in competitive conditions. On this basis, we conclude there is a single geographic market covering the whole Bailiwick of Jersey.

We therefore conclude that the product market definition on Jersey is the same as on Guernsey: “wholesale access to the Internet at a fixed location using an access network based on fibre or cable or using the 4G and ultimately 5G wireless access network via a fixed device in the whole Bailiwick of Jersey”.

6.5 Three Criteria Test

Having defined the market, the next stage is to undertake a three criteria test to establish if the market as defined is susceptible to *ex ante* regulation. Although this is not a requirement under the EU framework for markets included in the Commission’s recommendation on relevant markets, we consider each of these criteria below.

Is the market subject to high and non-transitory barriers to entry? There are very high fixed costs associated with building an alternative network. There is also no regulated access to unbundled local loops in Jersey making it not possible for an entrant to access the market without building its own network. For these reasons we consider that the market is protected by high and non-transitory barriers to entry.



Is the market tending towards effective competition? JT has a market share of nearly 90% with just a few connections self-supplied by Homenet and the mobile operators. On a forward looking basis, there is no indication that this is likely to change over the period of this review. We also understand that mobile operators' ability to expand is limited by a number of factors that prevent them extending their market share substantially. These factors include: site costs, power, cost effective on-island backhaul to sites and cost of off-island backhaul. We therefore conclude that the market is not tending towards effective competition.

Is competition law sufficient to address any competition problems? Competition law is concerned with addressing failures in a market that has been subject to competition *ex post* and not with opening up markets to new entry. It is not therefore sufficient to deal with problems in the wholesale broadband access market in Jersey.

We note that the European Commission recommends that the wholesale central access market is susceptible to *ex ante* regulation in EU Member States on the same analysis as above.

We therefore believe that the market as defined is susceptible to *ex ante* regulation and thus the proper subject of a market review.

6.6 SMP Analysis

As noted above in Section 3.3, analysis of SMP begins with an assessment of market shares within the relevant market and that a very high market share, in excess of 50%, is taken as evidence in its own right that the firm has SMP.

Figure 6: Wholesale Market Shares - Jersey

	Combined wholesale market share		
	2015	2016	2017 ³⁷
JT	91%	88%	88%
Sure	1%	1%	1%
Homenet	4%	4%	3%
Airtel	4%	7%	7%

Source: CICRA

Under the market definition proposed above, JT has a market share of 88%, which has declined slightly since 2015 although is still very high. There appears to be no likelihood of any competitive entry in the next two to three years or any significant expansion by Homenet's or mobile operators' self-supply.

³⁷ Total does not sum to 100% due to rounding.



We therefore consider that JT has SMP in this market.

Nevertheless, we have considered the factors listed at the end of Section 3.3 above to consider whether any might place a competitive constraint on JT. Perhaps the most important of these factors is barriers to entry and expansion and countervailing buyer power.

Access to local network infrastructure is essential for any firm who might wish to enter the broadband market. JT is in an incumbent position so already has such access. There are significant economic costs for any firm seeking to enter the market to compete with JT that form high barriers to entry. Unlike the situation on Guernsey, there are no plans for even limited build by an alternative network and we are not aware of any plans by Homenet to extend their cable network.

If firms cannot enter the market, or can only enter on a limited basis, this suggests that the incumbent firm faces little in the way of competitive constraint and so is likely to enjoy a position of SMP. Any buyer in the market has little in the way of countervailing buyer power as it has a restricted choice of supplier and would face the same barriers to entry if it tried to build its own rival network.

We are therefore of the view that JT does not face any significant competitive constraint that would overcome its large market share and so we consider that JT is in a position of SMP.