EXECUTIVE COUNCIL

PUBLIC

Title of Report: Update and Next Steps Regarding Telecoms Licence

Paper No: 141/15

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Report of: Director of Central Services and Financial Secretary

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1.0 Purpose

1.1 To update Executive Council on progress regarding discussions on a new telecoms licence and to recommend next steps.

2.0 Recommendations

2.1 It is recommended that Executive Council:

a) Notes progress on discussions between FIG and Sure regarding a potential new licence following commencement of this process in April 2015 [section 5];

b) Agrees that FIG (in co-ordination with Sure) continues to explore the cost-benefit of two alternative satellite solutions to increase international capacity [section 6];

c) Agrees that FIG invites Sure to submit final proposals for the implementation of 4G (LTE mobile data) in Stanley, MPA, Goose Green, Port Howard and Fox Bay, and extended 2G coverage (mobile voice) at a number of locations in Stanley, MPA and Camp [section 7];

d) Approves officers to enter the next phase of the process, namely to issue a Request for Information to Sure and to continue negotiations focused on achieving improved service for consumers at a fair price [section 8];

e) Notes the proposed regulatory approach [section 9] and the work planned to refresh the existing Telecoms Ordinance;

f) Agrees to publish this paper with redactions (as indicated) to protect commercial confidentiality.

3.0 Additional Budgetary Implications

3.1 None

4.0 Background

4.1 In April 2015, FIG invited Sure to enter discussions for a new exclusive telecoms licence. This process was initiated through a letter that set out three priority issues: first, increasing international capacity and data limits substantially; second, introducing fairer pricing regimes to protect consumers from excessive bills; and third, widening mobile voice and data coverage. The letter asked Sure to develop a menu of costed options for FIG consideration and discussion.

4.2 This followed a strategic review of telecoms in the Falkland Islands conducted by the consultancy firms Cartesian and Prieskel; surveys of business and residential consumers; and internal assessments progressed through the Telecoms Working Group. This work is summarised in ExCo paper 37/15 which also set out the main priorities for future telecoms provision to the Islands. Based on this paper, ExCo approved that officers should enter into negotiations with Sure in order to determine whether it is possible to reach a mutually satisfactory agreement on a new exclusive licence. ExCo also agreed that if this proves not to be possible, other options identified through the strategic telecoms review would be evaluated in greater depth.

4.3 It was agreed that the negotiations would commence with a proposal from Sure on how they might meet the main priorities identified by FIG should a new licence be agreed. This information would be non-binding and primarily designed to help FIG and Sure develop a more focused set of options to meet the priority requirements identified by FIG.

4.4 Following the letter from FIG on 6 April 15 there have been a series of interactions with Sure as outlined below:

- Initiation meeting/teleconference (15 April 15). Kick-off meeting between FIG and Sure to confirm expectations and process.
- Initial response from Sure (1 June 15). This contained outline proposals on how Sure might meet the priority issues raised by FIG and rough order of magnitude costs for these proposals.
- Clarification questions from FIG to Sure (9 June 15). Following an assessment of the initial response from Sure, FIG requested additional information and detail. This also included an assessment of the extent to which Sure had met FIG's requests in all areas.
- First supplementary response from Sure (17 June 15). More detail from Sure with a focus on Sure's business plan and economic information.
- Face-to-face discussions (22 and 23 June 15). A two-day meeting in London was held to discuss the outline proposals in more detail and to reach a common understanding of the key issues. During this meeting, FIG also requested briefings and meetings with senior representatives from two satellite companies to discuss options around increasing international capacity.
- Second supplementary response from Sure (12 July 15). FIG asked Sure to provide additional information following the meeting in London to confirm certain aspects of the international capacity and mobile proposals. This response also provided some vignettes of how these technical changes might translate into benefits for consumers.

4.5 In addition to regular meetings of the Telcoms Working Group (which is acting as *de facto* project board for this work), FIG has also sought external advice on the accuracy and validity of Sure's response. This advice has been provided by technical experts from Cartesian who have reviewed the main submissions from Sure and provided written and oral feedback to FIG. While Cartesian have highlighted a number of detailed observations, their overall assessment has provided FIG with some assurance of the validity of Sure's initial proposals. Input from Dr Chris Doyle (a regulatory economist) was also sought regarding future regulation.

5.0 Overall assessment of progress against FIG requirements

5.1 FIG has structured interactions with Sure into four broad categories:

- *Technical and infrastructure*: broadband, international capacity, mobile, fixed line etc.
- *Commercial and consumer*: billshock and overage, pricing, customer service etc.
- *Civic and social responsibility*: corporate responsibility, protecting consumers, national resilience etc.
- *Regulatory issues*: regulatory regime, price control mechanism, service levels, licence term etc.

5.2 Broadly speaking, FIG now has relatively good information on the two major technical requirements: international capacity and mobile enhancements. These are covered in more detail in subsequent sections. It is important to be clear that information received so far – and the discussions held – have been without commitment or prejudice. The primary purpose of this activity has been to explore whether an agreement between FIG and Sure is likely to be possible.

5.3 In terms of the other priority area – billshock and overage pricing – FIG has recently received proposals from Sure that illustrate potential new broadband packages with increased data limits during 2016; the ability for consumers to purchase additional data bundles; and new mechanisms for consumers to self-regulate their Internet usage.

5.4 We also have an indication from Sure on the level of investment the company is prepared to make should a new licence be agreed, and what costs it would seek to pass onto consumers in return for increased services. In terms of CapEx, Sure has proposed a total of **REDACTED** on a range of investments.

5.5 A summary of our current assessment of each area of negotiation is presented at Appendix A.

6.0 International capacity

6.1 Based on the public and business consultations conducted by FIG – and the strategic review carried out by our external consultants – the highest priority area for any new licence is to ensure a significant increase to international capacity. Indeed, for most modern societies across the world, fast and reliable broadband data is considered a basic utility.

6.2 In recent years, there have been significant increases to data availability and usage on the Falklands. The last six years have seen an eightfold increase in capacity achieved through the geostationary satellite link to the international fibre-network. This has been achieved through access to additional bandwidth and some increases in efficiency.

6.3 Looking ahead, it is almost inevitable that this demand for additional data will continue. Other developed nations also exhibit a doubling of data usage every two to three years, with the UK having seen particularly rapid growth in recent years.[1] With Internet sites and applications becoming increasingly content-rich – and consumer expectations often based on comparison with the UK – it is very important that continued increases in international capacity are achieved. The report from Cartesian that was previously presented to ExCo in March 2015 provided an analysis of a range of international comparators and an indication of the future evolution in the Falkland Islands under various scenarios.

6.4 **REDACTED**

6.5 As outlined earlier, there are two quite different options that have been presented to FIG (and confirmed by our external consultants). Each would offer the potential to increase international capacity but at different rates and with a different cost profile. The two options are discussed in the following paragraphs.

Intelsat Geostationary Satellite (C-band)

6.6 Intelsat is Sure's current satellite provider. It is a geostationary satellite in high orbit utilising frequencies in C-band which provides the highest level of signal stability and robustness. Intelsat have confirmed that they would be able to double capacity by the end of 2016; a further doubling of capacity by end of 2018 (at an additional cost **REDACTED**); and a further doubling of capacity beyond that (**REDACTED**).

6.7 The main advantages offered by this solution would be the re-use of existing infrastructure at the earth station in Stanley (so minimal CapEx costs); the demonstrable reliability of the signal; and the ability to scale up capacity in 'chunks' over time as demand increases.

6.8 The main disadvantages with a geostationary satellite are the likely incremental increases in OpEx costs as demand for data grows; the slower Internet speed possible (due to the high orbit)[2]; and the current physical limitations with bandwidth.

O3b Mid-Orbit Satellite (Ka-band) [+ Geostationary Satellite (C-band)]

6.9 The other option that is being explored with Sure is to move to a mid-orbit satellite technology. O3b were invited to submit a proposal and have provided a hybrid option that would utilise their constellation of 12 satellites to substantially increase the

[1] A recent report from Ofcom reported that the monthly residential broadband usage in the UK had risen from 17GB in 2011 to 58GB in 2014.

[2] The time taken for the signal to make the round trip between Stanley, satellite, teleport on the international fibre optic network and back is referred to as 'latency' and is directly correlated with the Internet speed that consumers experience.

Internet speed and data capacity available; with a high orbit C-band satellite as a back up to maintain reliability.

6.10 Their initial proposal would see a tenfold increase in international capacity in 2016 with further increases available as and when required. FIG and Sure are in discussions with O3b but the initial indications are that CapEx of **REDACTED** would be required for new infrastructure and equipment in Stanley. In addition, additional operating costs of around **REDACTED**. would be required over the first five years.

6.11 The main advantages offered by this solution is the very high capacity offered; the ability to increase capacity even more in the future; and the low latency (which would enable faster loading of webpages, video streaming, Skype etc). In essence, the experience would likely be similar to that achieved over fibre networks.

6.12 The main disadvantages are the significant CapEx costs (**REDACTED**) and the technical risks involved in switching technology (mitigated somewhat by continued use of C-band as back up).

Brief assessment and decision-making process

6.13 The decision on international capacity is a significant one for FIG that will need due consideration. We do not yet have all of the necessary information to make a recommendation but the choice is crystallising around a number of questions and decision criteria, including:

- Final costs and implementation speed for different options
- Predicting future demand for data usage on the Islands – and the socio-economic benefits of loosening the current constraints on broadband speed and data limits
- Risks and assurances on new technology
- FIG's appetite to include investment in new telecoms infrastructure and equipment within capital programme
- Consumer's willingness to pay for additional data
- Time horizon – it is difficult to project consumer requirements beyond about five years and hence flexibility is required

6.14 It is recommended that ExCo agree that officers should work with Sure to seek firm commercial offers from both satellite providers to facilitate a direct comparison. At the same time, to agree that officers should conduct further assessment of the technical risks, and potential mitigations, of the O3b/SES solution. External assistance would also be sought as appropriate to provide technical expertise and due diligence.

6.15 **REDACTED**

7.0 Mobile network

7.1 The existing mobile network is based on legacy 2G equipment from a vendor (Altobridge) that went bankrupt in 2014. Sure have proposed a new mixed 2G and 4G/LTE network to be rolled out through 2016 and 2017. This follows market testing conducted by Sure and technical assessment of options available.

Core proposal

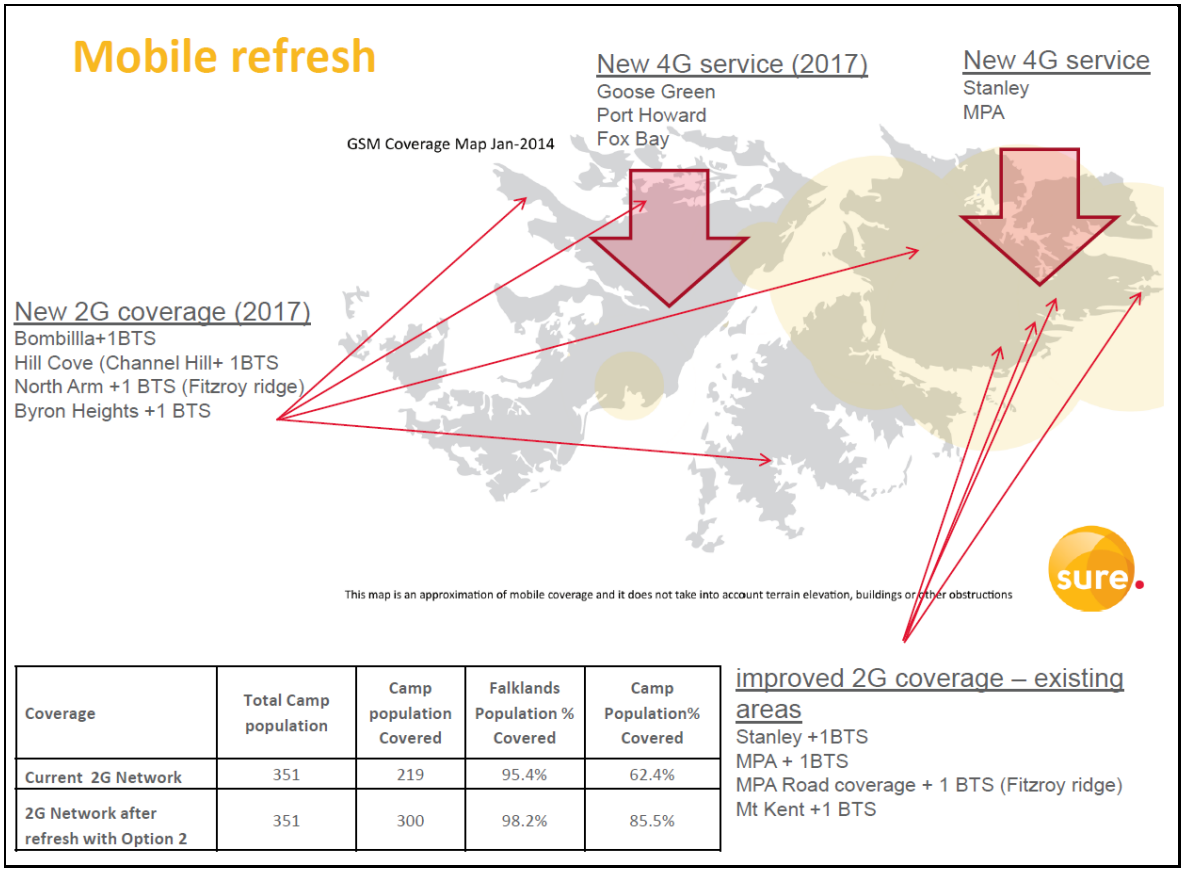
7.2 Existing coverage is provided from 12 sites that has been estimated to cover 95% of the total population (in terms of residential locations) but only 62% (estimated at 219 people) of the Camp population.

7.3 Sure have proposed to skip the 3G network evolution and move to a mixed 2G/4G network. This approach has been confirmed by our external consultants. In brief:

a) The 4G network would provide coverage to Stanley, MPA, Goose Green, Port Howard and Fox Bay.

b) The 2G network would cover these areas and in addition would significantly extend coverage in Camp. Sure have estimated that coverage in Camp would rise from 62% to 86% of residents. Figure 1 illustrates the proposal from Sure. In summary:
   - Improve coverage in the north Camp (roads and communities)
   - Extending coverage to Hill Cove and other communities on the Northern coast of West Falkland, Saunders, Carcass and Pebble Islands (including roads)
   - Provide coverage to the North Arm settlement

Figure 1: Proposal from Sure on New 2G/4G Mobile Network



Coverage	Total Camp population	Camp population Covered	Falklands Population % Covered	Camp Population% Covered
Current 2G Network	351	219	95.4%	62.4%
2G Network after refresh with Option 2	351	300	98.2%	85.5%

7.4 Sure believes there is a business case for these plans and consequently have indicated that they would make necessary investments.

Additional sites

7.5 FIG has discussed with Sure the feasibility of adding additional sites to the network to either provide coverage to additional parts of the road network or to small, more isolated communities. Sure have indicated that they would seek FIG funding for these additional sites.

7.6 Four sites have been identified that could be added for approximately **REDACTED** each, namely: Leicester Hill (for Port Edgar, Spring Point, Dunnose Head); Drone Hill (road coverage across Lafonia); Inlet Hill (Sheffield, Chartres, Little Chartres, Teal River, road coverage); Green Hill (Bold Cove, road coverage). The combination of these four sites would add extend mobile coverage for an additional 25 residents and roads in these locations at a cost of approximately **REDACTED**.

7.7 Other locations would be possible but the cost would likely be much higher at **REDACTED** per site.

Assessment

7.8 **REDACTED**

7.9 **REDACTED**

8.0 Next Steps

8.1 REDACTED

8.2 REDACTED

8.3 REDACTED

8.4 REDACTED

8.5 REDACTED

8.6 REDACTED

9.0 Regulatory Approach

9.1 REDACTED

9.2 REDACTED

9.3 REDACTED

9.4 REDACTED

9.5 REDACTED

9.6 REDACTED

9.7 REDACTED

9.8 REDACTED

9.9 REDACTED

10.0 Financial Implications

10.1 REDACTED

10.2 REDACTED

10.3 REDACTED

11.0 Legal Implications

11.1 REDACTED

11.2 REDACTED