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By email: [UHFSI@ofcom.org.uk](mailto:UHFSI@ofcom.org.uk)

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Dear Sirs

**Scottish Government Response to Ofcom Consultation:  
Future use of the 700 MHz band**

*Scotland's Digital Future: Infrastructure Action Plan*<sup>1</sup> outlines the Scottish Government's commitment to a future-proofed infrastructure that will deliver world-class digital connectivity across the whole of Scotland by 2020. This underpins an ambition for Scotland to become a world-class digital nation and requires that people living, working and visiting Scotland can communicate and connect instantly using any device, anywhere, anytime. Our 2020 vision for digital connectivity is set out in high level terms on [www.scotlandsdigitaldialogue.org](http://www.scotlandsdigitaldialogue.org).

We view future spectrum bands as having significant potential opportunity for Scotland to realise this vision, and therefore we welcome the opportunity to provide a high level response to this consultation at ANNEX A.

I hope this response is useful and I would welcome the opportunity to discuss this matter with Ofcom in further detail.

Yours sincerely



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**Deputy Director, Digital Strategy & Programmes Division**

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<sup>1</sup> <http://www.scotland.gov.uk/Publications/2012/01/1487/0>

## Introduction

Modern digital connectivity is an essential element of creating sustainable economic growth. Fast, reliable and affordable communication infrastructure allows businesses to improve productivity and communities to strengthen their services, paving the way for innovation and the development of emerging sectors of activity. Wireless communications such as mobile services, Wi-Fi and broadcasting, are an integral part of part of this infrastructure.

The Scottish Government fully recognises the key role wireless and mobile communications will play in achieving it world class digital connectivity in Scotland by 2020 in which ubiquitous coverage of converged fixed and mobile networks will offer connectivity using any device, anywhere and at anytime.

A recent study<sup>2</sup> estimates that the contribution of radio spectrum use to the UK's GDP was £52-56 billion in 2011, being 16–32% higher than in 2006. Most of it (around 60%) was generated by mobile communications, followed by broadcasting with approximately 20%.

Mobile data traffic levels have increased dramatically and there are predictions for global mobile data traffic to increase 13-fold between 2012 and 2017<sup>3</sup>. Also, traffic from wireless and mobile devices is predicted to exceed traffic from wired devices by 2016<sup>4</sup>. Other estimates point towards a demand for mobile data by 2030 that could be 80 times greater than today's values<sup>3</sup>.

This trend will increase the pressure on the use of the radio spectrum, a limited and valuable resource, requiring spectrum to be managed more effectively, unlocking maximum economic value and assuring space for its broader social value as it is the case for emergency services and defence.

The European Commission launched in 2012 the Radio Spectrum Policy Programme (RSPP) defining as one of its key objectives to make at least 1200 MHz of spectrum available for wireless broadband services in the European Union by 2015.

In November 2012, Ofcom published its UHF Strategy Statement, unveiling plans to avoid a mobile 'capacity crunch'. The objective is to provide additional low frequency radio spectrum for mobile broadband and simultaneously secure the benefits of digital terrestrial television (DTT). It is aimed to enable the release of the 700 MHz band, a part of the "digital dividend" spectrum currently used for DTT, for mobile broadband as part of future harmonised spectrum planning across Europe and the rest of the world. At the same time, it aims to ensure that the DTT platform can access the 600 MHz band, alongside other services sharing spectrum with it, without the need for another TV 'switchover'.

Harmonised spectrum planning is an important objective in that it creates economies of scale, reducing prices of handsets and widening its availability.

<sup>2</sup> Impact of radio spectrum on the UK economy, Analysys Mason report, November 2012.

<sup>3</sup> Cisco Visual Networking Index: Forecast and Methodology, 2012–2017, May 2013, [http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-481360\\_ns827\\_Networking\\_Solutions\\_White\\_Paper.html](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html)

<sup>4</sup> Techniques for increasing the capacity of mobile broadband networks: UK, 2012-2030, Real Wireless report, April 2012, <http://www.ofcom.org.uk/static/uhf/real-wireless-report.pdf>

Studies performed showed that frequencies below 1 GHz and, in particular, the 700 MHz frequency band have a set of advantages which can play a valuable role in meeting the future demand for mobile data capacity:

- Significant reduction of the number of new mobile sites needed to be built, reducing costs and the need for planning permission for new sites;
- Enabling better coverage in indoor and difficult to reach outdoor locations.

Using the 700 MHz band for mobile broadband would also open possibilities for future emergency services to be provided in this band, based on mobile broadband technology. There is currently a working group within CEPT Electronics Communications Committee (Project team FM49), looking at dedicated radio spectrum for public protection and disaster relief. Though further consultation within the UK will be required before allocation of a specific frequency band is made available.

According to Ofcom data<sup>5</sup>, mobile broadband services in Scotland have lower penetration than the UK average. In Scotland, 3G mobile coverage is 97% (premises), with the UK average at 99.1%. Given the set of advantages associated with frequencies below 1 GHz and the 700 MHz frequency band, above mentioned, a policy of release of the 700 MHz frequency band for mobile broadband use is considered relevant for Scotland as a way of improving mobile broadband services, both in terms of population coverage and quality of service, and contributing to reduction of the gap between Scottish and UK coverage levels.

## Questions in this call for inputs

*Question 1: Have we correctly identified and characterised the potential costs set out above, and what other costs – if any – should be taken into account in our assessment?*

The Scottish Government considers that the potential costs are well identified and characterised. As the need for changes to the DTT transmission network is associated with a substantial frequency re-plan for DTT, it can be expected that it will constitute a major factor in terms of costs. As any future release of 700 MHz spectrum requires international co-ordination and agreement with neighbouring countries in terms of a new DTT band plan, we agree to the requirement for a study, in advance of the spectrum release, on the changes to the DTT transmission infrastructure which should support Ofcom's position at the discussions for a new DTT band plan.

*Question 3: Have we correctly identified and characterised the potential benefits set out above, and what other benefits – if any – should be taken into account in our assessment?*

The Scottish Government considers that the potential benefits are well identified and characterised. Meeting demand for mobile data services is a major potential benefit, associated with the added ability to provide cost savings in the mobile network infrastructure due to a reduced number of cell sites needed, thus potentially enabling better rural coverage and improved indoor coverage. It can also allow the provision of Emergency Services using mobile broadband technology.

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<sup>5</sup> Communications Market Report: Scotland, Ofcom, July 2012

*Question 8: Have we correctly identified the costs and benefits that could vary depending on the timing of release, and the impact of those factors? Are there other costs and benefits which would vary depending on the timing of release of the 700 MHz band which we should take into account?*

The Scottish Government considers that Ofcom has correctly identified the costs and benefits that could vary depending on when the release occurs. If the results of the cost/benefit analysis are favourable, we would welcome the release happening earlier rather than later as this has the potential to improve mobile broadband services in Scotland, both in terms of population coverage and quality of service, and contribute to elimination of the current gap with UK average service penetration.

*Question 9: How quickly could the 700 MHz band be released? What would be the impact on DTT infrastructure costs of releasing at the earliest possible time compared to a later time? What would be the factors which affect these costs?*

Given the factors influencing the decision of release of the 700 MHz band, as described in Ofcom's consultation text, the Scottish Government considers that it would appear difficult for Ofcom to be able to implement this spectrum release before 2018.

*Question 20: Have we correctly identified and characterised the potential impact of 700 MHz release on consumers accessing DTT? What other impact – if any – should be taken into account in order to identify pre-emptive measures to reduce this impact?*

The Scottish Government considers that the potential impact has been correctly identified and characterised.