

# BEIRG Response: Variation of 900 MHz, 1800 MHz and 2100 MHz Mobile Licences

## Introduction

The British Entertainment Industry Radio Group (BEIRG) is an independent, not-for-profit organisation that works for the benefit of all those who produce, distribute and ultimately consume content made using radio spectrum in the UK. Venues and productions that depend on radio spectrum include TV, film, sport, theatre, churches, schools, live music, newsgathering, political and corporate events, and many others. BEIRG campaigns for the maintenance of Programme Making and Special Events (PMSE) access to sufficient quantity of interference-free spectrum for use by wireless production tools such as wireless microphones and wireless in-ear monitor (IEM) systems.

The economic and social importance of PMSE, and the creative industries which rely on it, is growing. In the UK the creative industries are currently responsible for 1.5 million jobs, and contribute £36 billion annually to the UK economy. While PMSE is growing in size and importance, the access to spectrum which is the life blood of its operations is being steadily eroded. Without access to sufficient quantity and quality of spectrum, the PMSE sector's ability to produce content for consumers is severely hindered. It is essential to recognise that any interference to PMSE usage poses a serious risk to the revenue generation of this sector. As interference affects PMSE content production at its live source, industry users will be directly affected and face a huge potential loss of earnings and consumer reputation.

In any production uninterrupted audio is **absolutely critical**. As such, any interference experienced that causes a wireless audio failure has severe consequences for both the production and the audience alike.

With the 800MHz band having now been allocated to mobile companies; available spectrum is becoming ever scarcer as demand for wireless technology continues to increase. PMSE access to spectrum is already extremely limited, with large productions already facing constrictions on the shows they can stage. There is therefore a need for new services to recognise, respect and co-exist with PMSE users, as well as to make the most of the spectrum that they have, to ensure fair usage for all. Consequently, any work to reform and increase the efficiency of spectrum used for mobile telecommunications over further auctions of additional spectrum must be welcomed.

**Question 1:** *Do you agree with the proposal to vary Vodafone's 900 MHz, 1800 MHz and 2100 MHz licences and H3G's 2100 MHz licence so as to permit those frequencies to be used to deploy 4G technologies?*

BEIRG is in favour of encouraging telecommunications companies to farm their already held spectrum more effectively, allowing better use of UHF bands and relieving the pressure on other spectrum users such as PMSE, who fear further selloffs. The past actions of extending mobile broadband spectrum access, over supporting the reuse of existing resources, did not encourage sufficient efficiency amongst the mobile telephone industry. While PMSE is an efficient user of spectrum, able to make use of interleaved spectrum to operate alongside

other users, such as DTT, mobile telephone technology is, at present, not. It is therefore imperative that mobile telephone companies make the most of their spectrum holdings.

BEIRG believes that it should be possible for mobile companies to ensure adequate rural mobile broadband coverage with the level of spectrum access that they currently enjoy. Additional spectrum allocation for mobile broadband is therefore not needed at this time, and allowing 4G services to deploy in 900 MHz, 1800 MHz and 2100 MHz is a much more suitable solution than pursuing further spectrum auctions. BEIRG is concerned that the mobile companies have so far not best utilised their current spectrum allocation and that much more efficient use could therefore be made of this limited resource.

BEIRG recognises that mobile broadband, and other services, bring benefits to consumers, but this should not be at cost to other industries reliant on spectrum, such as PMSE. Alongside refarming existing spectrum owned by the mobile companies, Ofcom must look to fully weigh up the various opportunities and technologies (for example, Wi-Fi connected to fibre optic cables) to deliver increased broadband access, alongside the refarming of spectrum, before rushing to allocate greater volumes of spectrum to MNOs, to the disadvantage of citizens and consumers.

Ofcom must plan for the long term across all industry sectors, and BEIRG would support future refarming efforts from Ofcom and the telecommunications industry. 800MHz and 2.6GHz, now auctioned to the mobile companies, must be made best use of in the most efficient way possible, to ensure fair use of spectrum among all industries. BEIRG feels that no decision should be made on the 700MHz band until it is clear how much demand can be met by refarming the licenses in question, and ensuring the efficiency of new services. If future demand can be met in this way, then BEIRG cannot see why access to the 700MHz band should be allowed for mobile broadband at the expense of other industries.

***Question 2: Do you agree with the proposal to vary Telefónica's 900 MHz, 1800 MHz and 2100 MHz licences and EE's 2100 MHz licence so as to permit those frequencies to be used to deploy 4G technologies where we receive formal requests to do so?***

See answer to Question 1 above – BEIRG would like all telecommunications companies to use spectrum responsibly and efficiently, and to refarm it for additional use as much as possible. Mobile companies need to make the most of what they have, especially as spectrum is limited and must allow all spectrum-reliant industries fair access. If PMSE does not have sufficient access to spectrum, its capability to produce content will be severely hindered – even to the point where the industry will not be able to supply enough content for consumers to watch, ironically in some cases via broadband access, rendering the increased mobile broadband levels unnecessary and impacting on the service quality received. Content creation comes before content delivery. This fact should not be underestimated, or ignored.

**Question 3:** *Do you agree with the proposal to vary the 900 MHz licences to increase the maximum power limit for UMTS by 3dB from 62 dBm e.i.r.p. per carrier to 65 dBm e.i.r.p. per carrier?*

No comment.

**Question 4:** *Do you agree with the changes proposed in section 5?*

BEIRG is concerned that a forced increase in coverage obligation to 90% of the UK will result in additional interference to bands which utilise PMSE.

Allowing high powered telecommunications users and 4G services to operate in 900 MHz, 1800 MHz and 2100 MHz, along with 800 MHz, could present interference to PMSE users operating in nearby channels in 700MHz, and the 1785–1800 MHz band. This will further reduce available spectrum, and have an effect on the benefits industries such as PMSE can bring to both citizens and the economy. It is vital for the continued operation of our sector that we are guaranteed clean, interference-free spectrum. The introduction of enforced guard bands at the lower end of 800 MHz and of 1800 MHz would go some way in alleviating the risk of interference. It is imperative that Ofcom work to ensure that spectrum is managed carefully and appropriate guard bands are provided within part of any new service allocations, and that these guard bands do not further encroach on PMSE spectrum.

It is worth noting that BEIRG is also extremely concerned that no formal mitigation or compensation scheme is being established for PMSE users who experience interference from new services in the 800MHz band. PMSE is at significant risk of interference from the new services - any interference to professional PMSE services is unacceptable. Sustained interference can threaten the ability of a production to deliver a show, which carries with it the risk of large financial loss. For DTT viewers, interference with PMSE equipment will disrupt their programming at its source. More information is needed on how Ofcom intends to guarantee that there is no interference suffered by PMSE users in channels adjacent to the new mobile services.

BEIRG would at least advocate a phased introduction of the increased coverage levels, allowing Ofcom the opportunity to see what the potential for interference will be, and time to act to prevent it where interference spills over from bands where new 4G services are being introduced into channels used by PMSE. Where problems are encountered then BEIRG believes that this change should be reassessed and the relevant issues re-addressed, with an alternative solution for increasing UK coverage.

During the clearance of the 800MHz band the PMSE industry already suffered significant financial and operational upheaval. Future disruption to the industry, and the spectrum to which it has access, is threatening its ability to continue to produce the world class content which is screened and exported throughout the world. This is in the interest of neither citizens, nor consumers, and BEIRG believes that Ofcom has a responsibility that the PMSE industry does not suffer interference from any new mobile services.