

Ofcom Consultation: improving consumer access to mobile services at 3.6 GHz to 3.8 GHz

The Met Office is the UK's National Meteorological Service, with critical national responsibilities for public weather services, including severe weather warnings and civil contingencies activities. Our ability to deliver these responsibilities relies on the use of different parts of the spectrum; for example to enable the use of satellite information and weather RADAR.

The Met Office agrees that the proposed approach seems to be the most efficient and effective use of the Spectrum in this range in the UK and agrees that there are significant potential benefits. However we would like to highlight a potential wider consequence of this decision so that it can be considered as part of the decision making process.

As the weather does not respect national boundaries, it is critically important that observational data are made available globally to ensure that forecasts of weather are as accurate as possible. Whilst we currently do not utilise the 3600-3800 MHz range for active services in the UK, there are important uses of C-Band frequencies in tropical parts of the world. In these areas the alternative frequencies at Ku band, used in non-tropical regions, are not practical to exploit for the delivery of meteorological products and data (for reasons such as rain fade). Hence it is imperative that at least some capacity to transmit at C Band (possibly between 3800-4200 MHz) is retained to ensure a transmission capability for safety of life meteorological data products within tropical regions. We would suggest that potential knock-on effects from setting a precedent in the UK also be considered as part of the decision making process.

Question 1: Do you have any comments on the use of the 3.6 to 3.8 GHz band by existing services?

The Met Office does not use the 3600-3800 MHz Band in the UK, but the wider 3600-4200 MHz range is used in tropical zones to transmit and receive vital weather forecast information and data which is required for flight safety and disaster mitigation. Hence at least some capacity needs to be retained as the reciprocal exchange of observational data from these tropical zones is crucial to global weather forecasting and climate monitoring activities. The range 3600-3800 MHz could be abandoned if some certainty on retaining capacity within 3800-4200 MHz is guaranteed.

Question 2: Do you agree with our identification of a trend towards the use of mobile in the 3.6 to 3.8 GHz band?

The Met Office agrees with the identification of the trend towards the use of mobile in the 3600-3800 MHz range, but reiterates the importance of retaining at least some capacity within the wider 3600-4200 MHz range.

Question 3: Do you agree with our high level proposal to make 116 MHz within the 3.6 to 3.8 GHz band available for mobile and 5G services, bearing in mind our statutory duties and the high level trends we have identified?

The Met Office agree that this seems to be the most efficient and effective use of the Spectrum in this range.

Question 4: Do you agree with our general approach regarding spectrum currently licensed to UK Broadband?

The Met Office agrees with the general approach.

Question 5: Do you agree with our assumptions, methodology, and conclusions with regards to potential coexistence between mobile and existing fixed links and satellite earth stations? Please refer to annex 5 for further details.

The Met Office agrees with the assumptions, methodology and a conclusion for the UK, but once again, it is important to consider the global implications. In tropical areas of the world the exploitation of alternative frequencies, such as Ku bands, for transmission of meteorological data and products is not feasible. This is due to the intensity of storms in those regions and issues with 'rain fade' of signals at the higher frequencies. As such, if Europe were to adopt the whole range 3600-4200 MHz for Mobile, to the exclusion of all satellite capacity in that range, other ITU regions may be tempted to do similar to realise global harmonisation. This threatens the delivery of data and products to tropical regions which could in turn jeopardise the global exchange of meteorological data vital to running global weather models and climate monitoring activities. Hence we need to consider the longer term implications of such a policy. If, however, the retention of adequate capacity within the 3800-4200 MHz range is guaranteed, then the abandonment of 3600-3800 MHz would seem a sensible way to proceed.

Question 6: Do you have a view on any of the two options we identified?

The Met Office agrees that the potential benefits to UK citizens are huge if it enabled the UK to be a leader in this field. At the same time, the assumption that relatively light use within a Spectrum band automatically equates to a use which can be removed, could have significant impacts on future investment decisions. This impact could be on both the decisions made by current incumbents of the band and other technology companies who have chosen to deploy within certain Spectrum bands.

Question 7: Do you have any quantitative evidence on the costs and benefits associated with the options? This include costs for existing users and/or consumers of existing services associated with potential changes, and benefits to UK consumers in gaining access to mobile services in this band.

The Met Office offers no comment on this issue.

Question 8: Do you have any other suggestions that would allow widespread 5G availability using the 3.6 to 3.8 GHz band across the UK while allowing certainty for at least some existing users to continue to provide the benefits currently provided by use of the 3.6 to 3.8 GHz band?

The Met Office offers no comment on this issue.

Question 9: Do you have any comments in relation to these proposals?

The general tenure of this proposal, that light use of a particular band may mean that current incumbents could be removed in future will add to uncertainty in some sectors, particularly

the UK Space sector. This in turn will have implications for future investment, hence the need to balance the proposal with guarantees of at least some capacity being retained in the 3800-4200 MHz range to counter such issues.