

Moorsweb
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**Moorsweb's response to OFCOM consultation on
2.3 GHz and 3.4 GHz Spectrum**

Ref: Notice of Ofcom's proposal to make regulations for the award of 2.3 GHz and 3.4 GHz spectrum

Summary:

This response proposes that Ofcom should utilise the 3.4 to 3.8 GHz radio spectrum for provision of rural broadband throughout the UK via Wireless Internet Service Providers (WISPs), in accordance with the government's recommendations for better rural broadband, the government's commitment to provide all properties in the UK with the universal service obligation (USO) minimum of 10 Mbps, and BD U.K.'s efforts to facilitate delivery of the USO.

The 5.7 GHz band is already heavily used to provide radio broadband in rural areas, and additional spectrum is necessary to achieve the government's objectives in a cost-effective manner, as fibre to the cabinet with copper for the last few miles is already demonstrably not cost-effective.

In recognition of the mobile industry's vigorous lobbying for use of 3.6 to 3.8 spectrum for mobile phone use, in addition to their other attempts at spectrum grab, Moorsweb is willing to compromise and agree to usage of this spectrum for local high-density requirements in town centres and suchlike, but is categorically opposed to the use of this spectrum for mobile across the nation, given that the mobile networks provision in rural areas already makes scant use of the currently available range of mobile spectra for 3G or 4G

Conclusion:

a small amount of additional 3.4 to 3.8 GHz spectrum will have an enormous impact in providing efficient, low-cost, fast, fixed wireless broadband to many rural broadband NOT spots. We implore Ofcom to seize this opportunity for national economic benefit and to provide serious competition to the ever-increasing monopoly of BT, Open Reach and EE.

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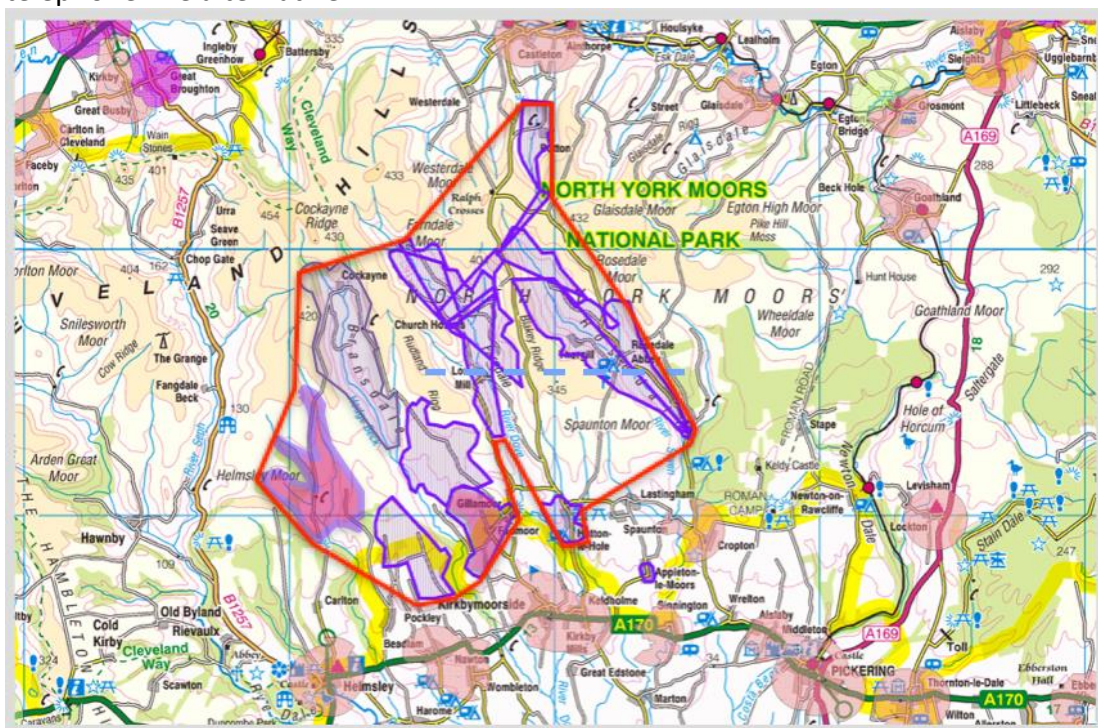
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Introduction

Moorsweb is a rural community Wireless Internet Service Provider (WISP). Moorsweb was set up as a local initiative to provide rural wireless broadband in the North York Moors national park in 2006 due to the complete lack of provision for fast broadband in rural areas from the big traditional ISPs. Moorsweb has continued to do so and has grown steadily for the last 11 years. We currently provide a wireless broadband service over a large central area of the National Park as shown in the map below where there is still no realistic telephone line alternative:



Moorsweb is pleased to respond to OFCOM's consultation on the auction of 2.3 and 3.4 GHz.

our comments mainly refer to 3.4 GHz since that is where we believe lies the most opportunity for National provision of improved rural broadband services.

2.3GHz would be very useful for additional channels like today's traditional domestic 2.4 GHz Wi-Fi where there is terrible channel overlap and congestion.

Moorsweb believes it is Ofcom's responsibility to enable the best use of Radio Spectrum in the national interest.

Therefore given the government's commitment to improved rural broadband and a 10 Mbps Universal Service Obligation, the clear inability of the incumbent infrastructure provider to deliver this service in an economic manner, and the innovative and cost effective

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results achieved by the fledgling UK WISP industry using the 5.7-5.8 GHz band, then it logically follows that further radio spectrum should be allocated in a similar manner for the provision of rural broadband by UK WISPs,

Moorsweb is just one of many WISPs in the UK who provide large swathes of rural areas which used to be "NOT spots" with reliable and cost efficient wireless broadband.

Current Use of Spectrum.

UK WISPs mainly use the channels in the 5.7-5.8 GHz band as there are far more channels available in this band than the 2.4GHz band, and the data capacity is far higher in the 5.7-5.8 GHz band.

The mobile network operators focus their efforts on profitable urban areas and the major road networks. They provide a limited service in rural areas, and in the last two years, enormous amounts of public subsidy has been poured into the "mobile infrastructure project" which in North Yorkshire Moors national park has only produced 2 masts.

Proposed Use of 3.3 to 3.8 GHz Spectrum.

Given the government's objectives for 10 mbps USO, it is clear that the UK WISPs have shown how economically effective fixed wireless access broadband can be in delivering broadband to not spots. However to achieve a coverage of the remaining widespread rural areas, further spectrum is essential to provide the necessary overall capacity and coverage on a national basis.

BDUK is helping fund broadband to the areas underserved by conventional fibre and copper broadband, and more spectrum would greatly assist achievement of the government's and BD U.K.'s objectives.

3.3 to 4 GHz is used widely elsewhere in the world for broadband via Fixed Wireless Access (FWA) technology and could be used in this country with a little government and Ofcom, support. There are many areas of the UK that would benefit from FWA in the 3.6-3.8 GHz band. Since higher powers are available and the frequency is lower, the distance and penetration through trees is much better. Consequently the cost of reaching smaller communities that may be shielded by trees is reduced using fewer base stations.

Many suppliers already have equipment which utilise this band and Moorsweb would desperately like to real to use it in the UK too.

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Unlike mobile, FWA operators are already deploying MIMO and achieving spectral efficiencies of over 2 Gbps and nearly 1 Gbps average.

Interestingly, the recent White Paper on 5G does not ask for 3.5 GHz spectrum but asks for greater than 6 GHz for higher capacity.

Other comments:

Finally it must be noted that BT continues with its anti-competitive practices.

In many areas of North Yorkshire there has been no interest whatsoever from BT and open reach in providing fibre to cabinets in remote sparsely populated areas. However it is very noticeable that in the last 2 years that wherever a small WISP such as Moorsweb, Clannet or Beeline have achieved a significant market coverage in areas previously deemed uneconomic by BT, that BT when given public subsidy for NOT spots have suddenly provided a fibre cabinet in the middle of one of these networks while continuing to neglect provision for the far reaches of the valleys, or other NOT spots with no provision for broadband whatsoever. This puts the financial viability of these fledgling networks at great risk, whereas BT's technology continues to be uneconomic without significant public subsidy and still does not provide a service to the far reaches of the valleys. This is a Scandalous use of public funds! Nevertheless, we will continue to compete vigorously to provide a better broadband service and a better customer service.

The harsh reality is that BT and open reach will need to deploy far more fibre cabinets far more widely to provide copper runs of less than 1.5km to all the premises in these sparsely populated areas, which is clearly a far more expensive solution than fixed wireless broadband.

Conclusion:

a small amount of additional 3.4 GHz spectrum will have an enormous impact in providing efficient, low-cost, fast, fixed wireless broadband to many rural broadband NOT spots. We implore Ofcom to seize this opportunity for national economic benefit and to provide serious competition to the ever-increasing monopoly of BT, Open Reach and EE.

Barry Sunley

On behalf of Moorsweb.