



# Home Office

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Our Ref  
Your Ref  
Date

20 November 2009

Mr Cesar Gutierrez  
Spectrum Policy Group  
Ofcom  
Riverside House  
2A Southwark Bridge Road  
London SE1 9HA.

Dear Mr. Gutierrez

Consultation on “Crown Recognised Spectrum Access in 3400 to 3600 MHz”

The Home Office Scientific Development Branch (HOSDB) recognises the increasing commercial demand for Public Sector spectrum holdings and in particular the need to release spectrum for BWA services. Equally however, there is an increasing need to retain spectrum and protect essential Emergency Service usage with the caveat that this EPSS usage must utilise spectrally efficient technology and be wholly justifiable in the current economic climate.

With regards to the specific consultation HOSDB would like to make the following points:

1. There is an on-going program of work to establish the exact requirement for “heli-teli” to satisfy both the current user requirement and future requirements for the Emergency Services. At this point even with significant and forecast improvements in technology allowing reduced channel sizes the current 33MHz block allocated to Emergency Service use is unlikely to be reduced.
2. To ensure that there is minimal interference between EPSS usage and adjacent BWA services, an external guard band of 5 MHz is necessary.
3. HOSDB proposes that the EPSS block be moved down to 3410 immediately adjacent to the NATO band and that MOD/Home Office agree an internal BEM. This is shown below where the EPSS band has been increased to 35MHz to fit to correspond to a minimum trading block size of 5MHz.

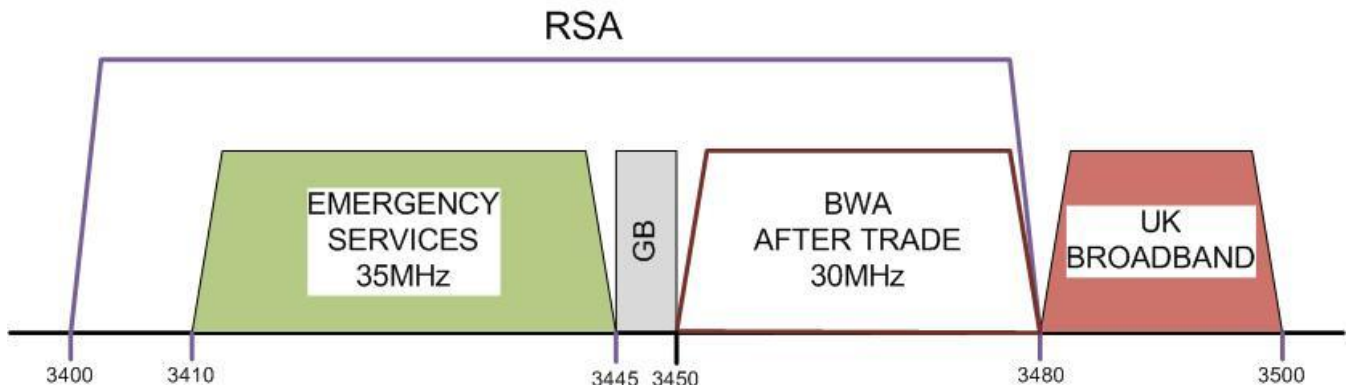


Figure 1: 35MHz EPSS Block moved down to 3410 MHz



4. HOSDB would like to reserve judgement at this point between a 35MHz or 40MHz block allocation for Emergency Services. The second proposal with a 40MHz block size is shown below in Figure 2

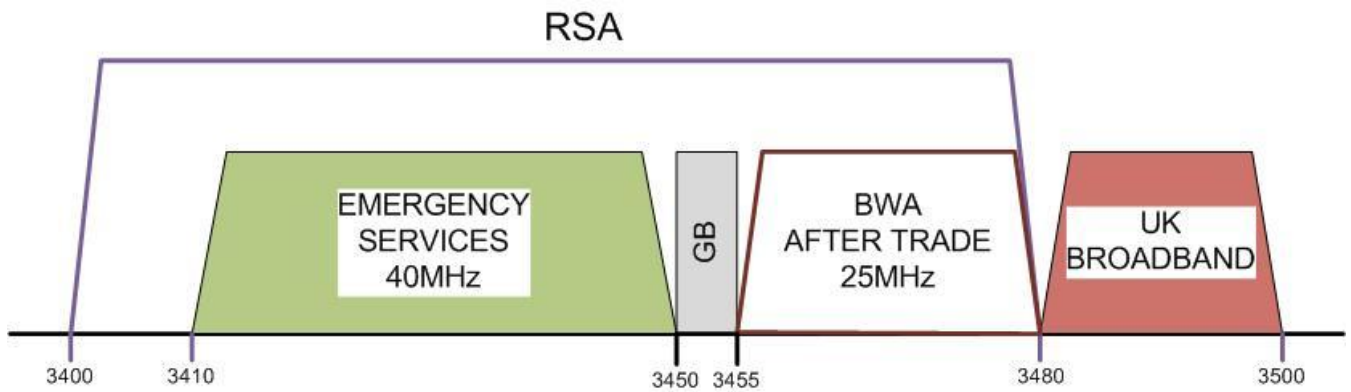


Figure 2: 40MHz EPSS Block moved down to 3410 MHz

Duncan Lawson  
Senior Scientific Officer

Question 1: do you agree that we should introduce RSA in the 3400 to 3600 MHz?

HOSDB and NPIA recognise the importance of the European Directive to harmonise the band 3400 to 3800MHz for terrestrial systems capable of providing electronic communications services in the community. The introduction of RSA in the 3400 to 3600 MHz band is most welcome in the provision of wireless broadband services to UK consumers and therefore should be released to market.

Question 2: do you agree that we should extend the relevant regulations to allow Crown bodies to be granted and to trade RSA in the 3400 – 3480 MHz and 3500 – 3580 MHz blocks? If not, which frequency ranges do you think the RSA regulations should cover and why?

We agree that the relevant regulations should be extended to allow Crown bodies to be granted and to trade RSA in the 3400 – 3480 MHz and 3500 – 3580 MHz blocks. However, the process should not be to the detriment of existing services in the band and all necessary measures must be taken to ensure continuity of service for the EPSS.

Question 3: do you agree that there should be no minimum trading unit for the RSA grant and the WT licences arising from trade in the band?

Given that there already exists a minimum unit in the form of existing guard bands, we would suggest that the minimum trading unit should be an integer multiple of 5MHz. However, we are aware that this therefore implies that the Emergency Service band should be increased to 35MHz.

Question 4: are there specific conditions that you consider should be included in RSA grants and WT licences arising from trading in the band?

Licences should be granted on a national basis, with the option to permit the national licence holder to sub lease the spectrum e.g. in rural areas. The RSA grant should also include coordination obligations and procedures between adjacent operators to maximise and optimise the use of spectrum.

Question 5: do you agree with the proposed in block emissions limit for base stations in the 3500 – 3580 MHz block?

We agree with the proposed in block emissions limits for base stations in the 3500 – 3580 MHz block so that the technical conditions for all BWA use in the band in the UK will be in compliance with the Decision parameters. This also ensures that the conditions on both sides of the 3500 MHz and 3580 MHz boundaries are equal affording users the same level of protection on both sides.

Question 6: do you agree with the proposed out of block emissions mask at the 3500 MHz and 3580 MHz boundaries for base stations?

We agree with the proposed out of block emissions limits at the 3500 and 3580 MHz boundaries where no agreement exists between adjacent users. We also agree that less stringent technical parameters can be used if agreed between neighbouring operators.

Question 7: do you agree that less stringent technical parameters should be permitted if agreed between neighbouring operators?

We strongly agree that less stringent technical parameters can be used if agreed between neighbouring operators.

Question 8: should we align UK Broadband licence conditions for base stations at 3500 MHz and 3580 MHz with those in the RSA grants if and when UK Broadband requests us to do so?

We have no view on this. However, any changes to technical conditions should not prejudice existing users and any measures taken should ensure continuity of existing services in the band.

Question 9: do you agree with the proposed in block emissions limits for terminal stations?

We have no view on the block emissions for terminal stations.

Question 10: do you agree that the block edge mask should be based on the spectrum emissions mask from ETSI EN 302 623?

We have no view on this

Question 11: do you agree with our derivation of regulatory out of block limits for terminals and, if so, which of the proposed four alternative regulatory conditions do you think most appropriate?

We have no view on this.

Question 12: should out of block limits for fixed, nomadic and mobile terminals be different?

We have no view on this.

Question 13: should we align UK Broadband licence conditions for terminal stations at 3500 MHz and 3580 MHz with those in the RSA grants if and when UK Broadband requests us to do so?

We have no view on this. However, any changes to technical conditions should not prejudice existing users and any measures taken should ensure continuity of existing services in the band.

Question 14: do you agree that the technical limits at 3480 MHz should copy those at 3580 MHz when the use immediately below 3480 MHz is broadband wireless?

We have no view on this.

Question 15: do you agree with the proposed technical limits at 3480 MHz for the scenario where the upper edge of the emergency services block does not change from the current allocation at 3475 MHz?

Our preferred option is that the Emergency Services block is moved down to commence immediately adjacent to the end of the NATO block at 3410 MHz and finishes at either 3445 MHz or 3450MHz pending further studies on the number of channels required. This will either increase the Emergency Service Block to either 35MHz or 40MHz respectively.

However, if the upper end of the Emergency Service block remains at 3475MHz then we strongly agree that proposed technical limit is as described at 3475 MHz.

Question 16: do you agree with the proposed technical limits at 3480 MHz for the scenario where the upper edge of the emergency services block is moved to 3480MHz?

No. Our preferred option is that the Emergency Services band is moved down so that it starts immediately adjacent to the end of the NATO block at 3410 MHz and finishes at either 3445 MHz or

3450MHz pending further studies on the number of channels required for current and Emergency Service usage. This will either increase the Emergency Service Block to either 35MHz or 40MHz respectively.

We strongly disagree with the proposed technical limit should the Emergency Service block be moved up to 3480MHz.

Question 17: do you agree that the technical conditions of the RSA grant at the 3500 MHz and 3580 MHz boundaries are the best option for the boundaries that will appear inside the 3500 – 3580 MHz block if the block is partitioned and traded into several smaller sub-blocks?

We have no view on this.

Question 18: do you think that the out of block limits for broadband wireless base stations in Figure 8.2 are sufficient to protect air-to-ground videolink receivers in an adjacent block?

Yes provided that a 5MHz external guard band exists between the Emergency Service block and adjacent BWA blocks as is currently the case.

Question 19: what are your views on the requirements for protection of air-to-ground videolink receivers from interference from broadband wireless terminals?

Provided that a 5MHz external guard band is maintained between the Emergency Service Block and adjacent BWA blocks at present we do not foresee an issue. However, our preference would be that adjacent BWA usage is for base stations to allow the potential for geographical coordination between the Emergency Service receiver sites and BWA Base stations.

Question 20: do you think that an out of block requirement for airborne videolink transmitters of  $-25$  dBm/MHz EIRP is sufficient to protect broadband wireless receivers?

Provided that a 5 MHz external guard band is maintained between the Emergency Service Block and adjacent BWA blocks at present we do not foresee an issue.