



**BT Response to the MOD Consultation:
UK Defence Spectrum Management
A Consultation on: An Implementation Plan for Reform**

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Executive Summary

- 1 BT welcomes this consultation and broadly supports the thrust of the MOD's proposals to reform UK Defence spectrum management and extend market principles to the MOD's use of spectrum.
- 2 BT would highlight the particular importance of providing the greatest possible clarity, at the earliest opportunity, concerning the likely extent to which the various frequency bands are likely to provide real opportunities for significant release or shared use of spectrum.
- 3 The timing and prioritisation of the bands for which release or sharing is contemplated is important and should take into account the expected level of demand. This will be influenced by factors including the degree of harmonisation of the alternative use of the spectrum, the availability of standards and equipment and whether equivalent spectrum is available via Ofcom. With this in mind we urge the MOD to focus in particular on the possibilities to release parts of the band 2310-2450 MHz, specifically the spectrum range 2310 -2400 MHz as this is identified as a global IMT band by the ITU.
- 4 We agree with the various options that are identified in the consultation as to how the spectrum management functions could be undertaken going forward, either internally by the MOD or with a third party. Although note our reservations concerning whether Ofcom would be the right body to exercise the military spectrum management function. The selection of the best option could be made by the MOD on the basis of a detailed analysis of the costs and benefits of the various options.
5. We highlight that the new regime would need to ensure that military spectrum use would need to be safeguarded if new style Spectrum Usage Rights or innovative technologies such as Cognitive Radio were to be facilitated in the released spectrum.

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1 Introduction

BT welcomes the MOD's consultation on the reform of UK Defence spectrum management in 2008-12, and on extending market principles to the MOD's use of the radio spectrum.

We support the general thrust of the MOD's proposals and plans as set out in the consultation paper. We believe that these have the potential to bring significant benefits in terms of greater overall economic value derived from the radio frequency spectrum resource in the UK, without compromising the vital requirements of the MOD. The market based approach could have further benefits in potentially providing additional financial resources to the MOD for other purposes, or to assist in driving greater technical spectrum usage efficiency.

In section 2 we provide some general observations on the consultation document and highlight some of the issues that BT believes to be relevant to the subject of the consultation and of particular importance.

In section 3 we provide answers to the consultation questions and provide concluding comments in section 4.

2 General issues

2.1 Clarity of future release and sharing plans

It is important for parties that might be considering the possibility of future access to any MOD spectrum that may be released or shared that relevant information on candidate bands is made available as early and as fully as possible. Given the incomplete understanding of the situation in bands where detailed audits have not been completed, it is inevitable that the MOD will need to make a judgement between on the one hand the need to not give rise to false expectations of spectrum becoming available and on the other hand the need provide sufficient warning of the likelihood that a given spectrum band will be opened up.

The present proposals list numerous bands but generally appear to be somewhat imprecise in what is stated, so that it is not possible to really assess which bands are more likely to become available than others, nor the proportion of spectrum in each band that is likely to become available, nor any idea of the possible extent of the areas where geographic sharing could be

possible, or the periods of time during which sharing that may be applicable. This approach is to some extent understandable in order to generate and gauge the level of interest in the various bands, but equally it risks a lack of focus of interested parties on particular bands and specific opportunities such that if resources had been focussed more narrowly they might otherwise lead to a more rigorous business case tailored to the specific situation in a specific frequency band.

Our preference would be for MOD to release more information at an earlier stage, even if it is indicated that this is preliminary in nature and subject to later correction. This would mean that more thorough analysis of the most promising opportunities can be initiated at the earliest opportunity, even if they cannot be finalised until later. Similarly time would not be wasted on building business cases for spectrum bands that are unlikely to offer the required degree of utility.

2.2. Priority and timing

BT notes that there are many frequency bands that may offer potential for release or sharing of the spectrum resource. We would highlight the benefit of seeking to focus efforts on frequency bands that may be used for non-military use in other countries and those bands where technical standards for alternative uses already exist and where wireless technologies that might be of interest for civil use are widely available. For example, following the ITU World Radiocommunication Conference 2007, the band 2300 – 2400 MHz is identified within the ITU Radio Regulations as one of the global frequency bands for IMT. We note that this band is mentioned in the consultation document. We are interested in receiving fuller details of the MOD's assessment of this band and subsequent release plans and would encourage the MOD to place a high priority on achieving the release of spectrum in this frequency range to the market at the earliest opportunity.

3 Answers to the consultation questions

Question 1. Do you agree that the MOD has identified the options and factors that MOD should consider before deciding whether or not to extend the audit of the spectrum it uses?

Yes, we agree that the most relevant options and factors have been identified in the consultation document.

Question 2. Do you have any views on the priority with which MOD should audit its spectrum use?

As mentioned in section 2.2 above we would suggest that effort is focused on frequency bands for which it may be expected that demand to use the spectrum for new purposes would be greatest. The degree of international harmonisation of the spectrum bands and availability of standardised

equipment are obvious factors. Also, bands that are suitable for new applications, but for which similar spectrum is already available from Ofcom, should not be a priority.

Question 3. *Do you agree with the phased approach to applying for RSA that the MOD is proposing?*

BT agrees that the introduction of RSA is a necessary pre-cursor for the move to market based spectrum management and that due to practical considerations a phased approach, aligned with the prioritised timing of the bands selected for release/sharing, is a sensible approach. If the priority of the bands to be released / shared changes then of course the RSA work programme would need to be revised accordingly.

Question 4. *Do you agree with the MOD's plans for releasing and sharing the spectrum it uses?*

Yes, BT broadly supports the plans that the MOD has outlined in the consultation document for releasing and sharing the spectrum it uses.

As stated in section 2.1 above we would emphasize the importance of making as much detailed information available at the earliest opportunity so that initial assessment of bands by potentially interested parties can be targeted appropriately.

Question 5. *Do you agree with MOD's priorities for releasing and sharing spectrum?*

As stated in section 2.2 and also in our response to Question 2 we believe that priority should be put on bands for which demand is expected to be greatest and where significant opportunities to share / release spectrum are likely to exist. This evaluation should consider as a minimum the degree of international harmonisation, availability of standardised equipment, and whether equivalent spectrum is available already from Ofcom.

With the above considerations in mind we urge the MOD to focus in particular on the possibilities to release parts of the band 2310-2450 MHz, specifically the spectrum range 2310 -2400 MHz as this is identified as a global IMT band by the ITU.

Question 6. *Do you agree with MOD's outline timetable for initial spectrum releases?*

BT agrees that the timetable set out may be a suitable starting point based on the information that the MOD has available on its spectrum use and external demand at this time. However, it may be necessary to revise the timetable

and priorities as new information comes to light and taking into account the principles mentioned in our response to Question 5.

Question 7. *Do you agree that MOD has correctly and fully identified the factors and options that should be considered before deciding to release and acquire spectrum in the market?*

Yes, we agree that the main factors and options are correctly identified within the consultation document.

We would also draw attention to the need to ensure that the military use of spectrum is properly safeguarded if and where new style Spectrum Usage Rights (SURs) are to be entertained in the spectrum that is to be shared or released. Whilst these give flexibility and support technology neutrality, it is essential that the correct propagation models are selected or developed for the bands concerned and that interference thresholds are properly established. Similar due diligence will be required should MOD consider facilitating innovative technologies such as cognitive radio in military spectrum.

Question 8. *Do you agree that MOD has correctly and fully identified the factors and options that should be considered before deciding the best means with which to interact with the market?*

BT agrees that the document identifies the main factors and options that should be considered for release and acquisition of spectrum and the available options of geographical, frequency and time sharing of the spectrum bands.

Question 9. *Can you identify any different approaches for the MOD to manage the spectrum it uses and engage with the market to deliver better value for money for defence and the taxpayer?*

The main options seem to be addressed within the consultation document. The level of resources (internal or outsourced), including investment in IT systems, could be an additional factor to be considered in terms of how this may affect the speed at which the move towards market based spectrum management mechanisms can be achieved and the benefits that this might bring in terms of more effective spectrum management.

Question 10. *Which options (from paragraph 6.7) should be considered, or discounted, and if so why; either in respect of options already identified in section 6, or additional options, not identified?*

We interpret the options in paragraph 6.7 in simple terms to be that the MOD either (i) relinquishes management of its spectrum to Ofcom, or (ii) further builds up its own internal spectrum management capability for its own requirements and also interacts with the market itself, or (iii) manages its own spectrum use and reforms defence related spectrum management for military

use, but has a third party manage, exploit and acquire spectrum on the commercial market.

We consider that all of these options should be considered since each may have merits. The best course might be identified on the basis of a business case where the costs and benefits of each option is analysed in detail. This should cover the costs and benefits to the MOD as well as whether one option or the other is likely to give greater benefits to the value that can be derived from the radio spectrum resource in the UK overall. However a further consideration should be whether Ofcom might face a considerable conflict of interest in managing both the public spectrum and military spectrum where different policy issues might need to be considered. And in that there would be no competition between the two routes of access to spectrum.

Question 11. Which issues relating to section 6 should be considered when evaluating options, and if so why; either in respect of issues already identified in that section, or additional issues, not identified?

BT agrees that all of the identified issues could be relevant and should be considered.

Question 12. Is the scope of decisions required against each of the four questions at paragraph 6.3, as indicated in section 6, sufficient and, if not, how and why it should be extended?

BT agrees that the scope of the four questions identified in section 6.3 of the consultation is sufficient.

4 Conclusions

BT welcomes this consultation document and broadly supports the thrust of the proposals. We have provided our views on the questions posed and have also highlighted particular issues that we feel are important. We look forward to receiving further details of the MOD's plans for reform of defence spectrum management and the possible opportunities for release and sharing of spectrum as these evolve. We would of course be pleased to discuss any of our points in greater detail if required.