

BBC Executive's response

Ofcom's consultation on clearing the 800 MHz band

Executive summary

The BBC welcomes Ofcom's desire to consult extensively with all parties and is keen to support fully this process, taking part in due course to further consultations or workshops organised by Ofcom.

The BBC welcomes Ofcom's recognition that spectrum is a public good, and that its management needs to meet public objectives, which cannot always be achieved through pure market mechanisms. Therefore, the BBC supports Ofcom's efforts to ensure that spectrum is managed in the most effective way, taking into consideration broader considerations than those that technology- and service-neutral auctions can, including public and social value.

The BBC also agrees with the objective of ensuring that UK consumers can benefit from economies of scale and cross border functionalities which a harmonised spectrum use would generate. As already noted by the BBC in previous responses to consultations on the digital dividend, European spectrum harmonisation might not be consistent with technology- and service-neutral auctions separately held in each country.

That said it is then necessary to assess whether the clearance of channels 61, 62 and 69 so as to align the UK digital dividend with that of European countries will be in the best public interest. This clearance might also help achieve the objectives set out in the Government's Digital Britain report.

The BBC welcomes Ofcom's preliminary analysis of the advantages and downsides of this clearance, and broadly agrees with the criteria proposed for this assessment. However, it believes that further work needs to be done, taking into account all the costs including to consumers, broadcasters, producers and communities, but also giving a realistic estimate of the benefits, which are by their nature very difficult to assess. The BBC would need further reassurance that the costs associated with this clearance will not be borne by broadcasters.

The BBC will support this work and play its full role in relation to consumers, but is concerned by the potential impact of this reorganisation on Freeview viewers; should the process be too cumbersome or lead to a loss in DTT coverage, there is a risk that more consumers switch to other platforms, jeopardising the long term future of Freeview, and decreasing overall competition in the television sector.

In addition, the BBC would welcome further clarity on whether or not sufficient spectrum will be available to compensate for the loss of Channel 69.

Question 1. Do you agree that clearing DTT from channels 61 and 62 and PMSE from channel 69 to align the upper band of cleared spectrum in the UK with the emerging digital dividend in other European countries is likely to further the interests of citizens and consumers to the greatest extent?

The BBC welcomes Ofcom's recognition that spectrum is a public good, and that its management needs to meet public objectives, which cannot always be achieved through pure market mechanisms. Therefore, the BBC supports Ofcom's efforts to ensure that spectrum is managed in the most effective way, taking into consideration broader considerations than those that technology- and service-neutral auctions can, including public and social value.

The BBC also agrees with the objective of ensuring that UK consumers can benefit from economies of scale and cross border functionalities which a harmonised spectrum use would generate. As already noted by the BBC in previous responses to consultations on the digital dividend, European spectrum harmonisation might not be consistent with technology- and service-neutral auctions separately held in each country.

That said it is then necessary to assess whether the clearance of channels 61, 62 and 69 so as to align the UK digital dividend with that of European countries will be in the best public interest.

There are considerable costs and benefits associated with this clearance but assessing them accurately is not straightforward.

(1) On the costs side : Work necessary to realise the UK digital dividend has already begun, and a change to existing plans will mean that some of the resources already committed to it will be wasted, and that consumers, as well as broadcasters and the PMSE sector, will suffer from further disruption and potentially from additional costs. Until further work is done, it is not possible to assess these costs. In particular, at this stage, it is not possible to confirm Ofcom's current estimate that these costs lie in the range of about £90-200m.

(2) On the benefits side : the estimates are even more speculative. Ofcom state that their conservative estimate of these benefits, in net present value terms, ranges between £2 billion and £3 billion, mainly because if they make the same spectrum available as other countries, better mobile broadband services can be provided to consumers at lower cost. But there is no certainty that these benefits would occur, that mobile broadband services would be provided on that spectrum, nor is it obvious that they would be "better" than other potential, yet unknown, services.

But, beyond this cost-benefit analysis, we believe that Ofcom should fully assess the following factors:

- impact on consumers of the need to retune their services; whilst a simple operation in theory, the recent issues faced by consumers going through the switchover process show that the difficulties some people might experience should not be underestimated, especially those more vulnerable people who are currently receiving help from the Switchover Help Scheme
- risk that more consumers move away from Freeview, due to the complexity of this new switchover; this would ultimately decrease the competitiveness of the platform, and make the overall TV market less competitive

- risk that a delay or a disruption to the switchover process decreases the global benefits expected from an early release of the digital dividend
- risk that there is not enough spectrum for PMSE users
- risk that the complexity and the cost of buying new equipment is prohibitive for small users (local festivals, churches, schools), jeopardising the vitality of community life in the UK
- risk, raised by the RNID, that those relying on hearing aids using channel 69, are no longer able to use these systems, incurring extra costs, and even the risk that no other suitable bands are found for them

In summary, it is clearly essential to complete a thorough cost-benefit analysis of changing the UK switchover plans at this late stage, going beyond a pure financial assessment. Significant planning work is required before such analysis can be undertaken, and a fully informed decision be made. We welcome Ofcom's desire to consult extensively with all parties and are keen to support fully this process.

Question 2. Do you agree that the proposed DTT migration criteria are proportionate and appropriate? If not, please explain why and clearly identify any other criteria you believe should be adopted and why.

The BBC broadly agrees with the DTT migration criteria proposed by Ofcom but would (a) propose a different order of priority and (b) suggest that Ofcom should distinguish between criteria to determine whether or not to implement these changes and principles to be followed during the implementation.

In deciding whether or not to clear the 800MHz band the criteria should be around:

- A clearly positive cost-benefit analysis
- The ability to compensate effectively and adequately those suffering from the changes, including broadcasters, the PMSE sector and consumers
- An effective and well-funded plan for supporting vulnerable consumers
- A detailed plan allowing the DTT coverage to be the same as would have been without the changes.

Principles to follow during the implementation

The first and foremost principle should be to minimise impact on consumers and to ensure any cost they would have to bear would be fully compensated, and any disruption they would face adequately mitigated. In particular, the decision should not be made before the implications for viewers, especially the elderly and the vulnerable, are fully assessed, and an adequately funded plan to deal with those designed.

The second criterion should be that all costs related to the clearance can be paid by those benefiting from that clearance, and that the existing authorised and planned users of channels

61 and 62 should not bear extra costs whilst being able to offer their services on DTT to the same number of households. This is a key point, as there could be a risk that some planning changes could lead to a loss in coverage of the DTT multiplexes unless mitigating measures are implemented, at a cost. As a principle, each DTT multiplex should be able to reach the same level of coverage before and after the change. The BBC is concerned that the current drafting “the costs that must reasonably be incurred in order to clear the spectrum” and “any solution should be consistent with existing policy objectives for DTT coverage after DSO”, creates some uncertainty and could give rise to significant debate. What must be taken into account are the costs reasonably incurred to ensure that the level of coverage remains the same as would have been otherwise reached. The notion of “existing policy objectives for DTT coverage after DSO” is much less clear and precise than the definition of the coverage levels at each site, which should be preferred.

The BBC broadly agrees with the third principle, that the switchover process should not be disrupted, or that disruption should be kept to a minimum and only incur when there are clear benefits.

The BBC has therefore proposed, in addition to the overall priorities of minimising any impact on broadcasters, consumers and the DSO schedule, the following principles for planning channel changes:

- The resulting coverage should be the same for all six multiplexes, as far as possible, so that consumers (and broadcasters) are not disadvantaged.
- Where an impact on consumers’ reception is unavoidable (i.e. the impact of an essential change has been limited to the smallest possible number of consumers), then consumers should be compensated by the provision of a new aerial.
- Broadcasters and other major stakeholders should be able to influence the timescale for channel changes, in order to minimise any impact on other significant transmission upgrade programmes (notably DSO and DVB-T2).
- No costs should be borne by broadcasters, who should be compensated for any management, communication and other costs incurred.

Question 3. Do you have views on the options identified and our assessment of them? Do you believe there are other, superior options, and, if so, why? Do you agree that the hybrid option is most consistent with the DTT migration criteria?

The BBC broadly agrees with the three options set out by Ofcom but it is not yet clear which one would deliver the best overall outcome. The four quantitative measures adopted by Ofcom are very helpful and should help to uncover the optimal solution:

- change to post-DSO PSB multiplex coverage;
- change to post-DSO coverage by all six multiplexes;
- the number of household aerial changes required; and
- the number of household receiver retunes required.

Option 1 would be much simpler to implement than options 2 and 3 but would have a huge impact on consumers, maximising the number of those in need of a new aerial or even losing DTT coverage altogether. This would in turn have a substantial negative impact on the reach of Freeview and on the business model of multiplex operators.

The choice between options 2 and 3 is not straight forward, as there is a trade-off between the number of consumers needing a new aerial and the number of sites where new antennas will be needed, increasing the cost for multiplex operators, but also the number of consumers having to retune their equipment. As shown by the latest DSO experience, retuning is not a process consumers find easy. Since there might be many months between the first and the second set of retunings, it is not certain that consumers' understanding of the retuning process will really improve.

Therefore, the BBC believes that at this stage, Ofcom should keep all options open, and not make a definitive choice between options 2 and 3. This would give the JPP some flexibility to optimise the plan, including by re-allocating channels between PSBs and COMs after the plan is complete to ensure 98.5% PSB coverage. It might also be useful to keep the ability to use in-group allocations that might be better than the few channels available in the overlap channels between 48 and 53. In addition, whilst the priority should be to preserve the coverage of the existing 6 multiplexes, the opportunity of creating a seventh multiplex, adding further services to Freeview, should not be overlooked.

It is worth noting that newer receivers (such as those supplied by the Help Scheme and for Freeview HD) will be starting to implement technology to respond to a broadcaster-flagged requirement to retune in the next few months. Implementing these flags/triggers will become a significant aid to future retuning and the costs for implementing these on a rolling basis in the plan to clear Ch61-62 should be factored into the costs apportioned to the new incumbents.

Question 4. Do you have views on the implementation-timing options identified and our assessment of them? Do you agree that DSO-integrated implementation is most consistent with the DTT migration criteria? If not, why not?

The choice of either of the implementation-timing options needs to take into account:

- the relative financial costs and benefits of an earlier implementation versus a later one
- the extent to which consumers would find a process happening at the same time as switchover less or more disruptive than a process happening at a later stage
- the time necessary to design and implement the plan itself. The latter point seems to have been slightly underestimated.

A change to the DSO frequency plan, at the simplest level, results in either a change to the output frequency of those sites that transmit on channels 61 and / or 62, or a change to the

RBL input frequency of the relay stations where the parent station uses 61 or 62 for PSB services. There are approximately 450 stations that therefore require changes, including 23 of the main 6-mux stations (11 with dependent relays affected), serving 30% of the UK population in total. Many more stations would require changes as the result of a two step change (Ofcom's preferred planning approach). If it is then assumed that all these sites need to be visited by engineers at the time of the frequency changes, then to change to the new frequency plan is likely to have to happen on a main station basis, as per the DSO roll out. As the consultation noted, development of the B15 Plan took 9 months, although this was the time taken to refine the plan already existing under B14. The development of a new Implementation Plan to move away from Channels 61 and 62 could therefore take considerably longer, as discussed below.

Ofcom have proposed 3 options for the timing of implementation:

- Recast DSO
- Post DSO Implementation
- DSO Integrated Implementation

The B 16 Group has reviewed these three options from the viewpoint of producing a new Implementation Plan. The BBC refers to its detailed response, but agrees with the group's conclusions that:

Recasting DSO in order to accommodate the release of channels 61 and 62 is seen by the B16 Group as disruptive and the halt in existing plans would endanger achievement of the digital switchover programme dates published by government.

The Post DSO Implementation option is likely to be the simplest method of implementing the frequency plan change, probably in a two step way:

1. Move stations that have frequencies between channels 48 and 53 to 39 and 40, as there will be no existing services in these frequencies;
2. Move stations that use 61-62 to 48-53.

The DSO Integrated Implementation option, seems interesting but might not be very different from the previous one. While opportunities to integrate implementation of these changes with the main DSO programme should not be overlooked, the opportunities that remain available for this integration option should not be overestimated, as it is likely it could only be applied to a limited number of stations in 2012. The site design for almost all of the main stations is already complete and to revisit those now could jeopardise the DSO timetable. In addition, it is worth highlighting that by the time a conclusion to the consultation process is reached, it is likely that the use of channels 61 and 62 at the vast majority of sites will already have been committed to, either through contractual build obligations or through the necessity of ensuring that DSO published dates are complied with. The scope for integration with DSO may therefore be limited.

Another element to take into account is the potential need for additional relay stations to restore coverage lost as a result of the changes, and of bilateral discussions. This is most likely in the south-east of England. While this area is not scheduled to switch until 2012, the lead-times on site planning, acquisition, design and build make it unlikely that any such new sites will be ready to be brought into *service in 2012*.

The BBC would therefore suggest that the post-implementation option should be considered as the base case, but that wherever they are possible, opportunities for integrating

implementation of the changes required by this plan and DSO in the later phases (2012) should not be overlooked. In addition, the BBC would like to stress that whichever implementation option is decided upon, the actual implementation is likely to be as complex – and need as much planning – as the existing DSO regional roll-out plan.

Question 5. Do you agree that a programme-control and -governance arrangement such as that outlined above is appropriate?

The BBC strongly believes that the programme – control and -governance arrangements are key to the success of the process and supports Ofcom’s view that they should be carefully designed.

As stressed by Ofcom, a clearly scoped, well designed and appropriately resourced programme with clear objectives, a strong mandate and clear lines of accountability will be necessary. Clear records should be kept of proposals, decisions and implementation plans throughout the process. We also agree that the parties with most at stake should have a central role in, and responsibility for, driving and ensuring the success of this programme. addressing issues as they arise.

The BBC proposes that the JPP takes the lead in planning channel changes, supported by the JFMG. The changes proposed, with options where appropriate, should then be brought to a stakeholders group, with all the key stakeholders consulted.

However decisions should be by a steering group, chaired by Ofcom and comprising those directly affected by the changes, multiplex operators and representatives of the funding body. As Ofcom rightly states, although there may be a common objective of implementing in a way that minimises any adverse impacts on DTT and viewers, there may also be conflicting views over how best to achieve that objective. In addition, some conflicts of interests might arise when it comes to decisions of the detailed implementation of the plan: i.e. cost of a new antenna delivering the same coverage as planned before the changes versus simpler and cheaper modifications delivering a lower coverage. In some cases too, there might be commercially sensitive information on costs which might not be appropriate to be discussed in an open forum, or between competitors.

It is therefore essential to agree on clear criteria and decision-making processes.

The BBC would be happy to take part in any workshop Ofcom would like to arrange to discuss, with other key stakeholders, how the programme structure might be designed and which governance and control arrangements should be set in place.

Question 6. Do you agree that the four cost categories adequately capture the costs associated with clearing DTT from channels 61 and 62? Are there any costs that do not appear to have been accounted for in any of these categories?

The BBC agrees that the four cost types identified by Ofcom are all relevant: spectrum planning; infrastructure reengineering; communications and support; programme management. However, two other types of cost should be taken into account :

- (1) New (ongoing) costs arising as a result of the 61/62 release: for instance, some RBLs might become unviable and therefore require lines (with associated annual

costs) to be installed. Other additional sites might be required to meet the target coverage criterion. This would have both a one-off and ongoing costs. At the moment, it is unclear that these ongoing costs will be adequately funded too, but the BBC strongly believes that they should be covered in one way or another (possibly through a lump sum if this appears easier than annual payments).

- (2) Costs to viewers of purchasing and installing new receiving equipment, reorienting their aerials, or paying for an installer to retune their television sets or set-top boxes. The BBC is particularly aware of the issues which those who would have been eligible to the help scheme might face, and of the fact that DSHS will not be in a position to support them through this process. It might be possible to design and fund some form of a successor to the help scheme, but that would raise significant policy and financial issues which require careful examination.

Question 7. Do you agree that our cost profile is a reasonable basis for planning the capital expenditure for clearing DTT from channels 61 and 62?

The BBC cannot respond at this stage, in the absence of a detailed planning study, but is concerned that the costs identified by Ofcom so far are too low, in particular because the timing and resources necessary for the planning changes have been underestimated, and the opportunities for integrating the changes with the DSO plan overestimated. In addition, the two types of costs not yet taken into consideration by Ofcom could be quite significant.

Question 8. Do you agree that these are the most appropriate criteria to assess which spectrum is the best alternative to channel 69 for PMSE?

The BBC believes that these are appropriate criteria.

We believe that any alternative spectrum must be fit for purpose and be free from undue interference from adjacent spectrum users. It must also be available across the whole or large parts of the UK, and adjacent to other spectrum that can be used by wireless microphones, in order to reduce the complexity of operations and minimise equipment costs (given the narrow tuning ranges of equipment). It will also be crucial to ensure that alternative spectrum is available on a cost-effective basis prior to channel 69 becoming unavailable.

The BBC believes that similar criteria will need to be applied should the decision be taken by Ofcom to also move the use of equipment used by those with hearing difficulties from channel 69; clearly those currently using this sort of equipment will be best placed to assess such criteria.

Question 9. Do you agree with our technical and coverage analysis of the possible alternatives to channel 69 for PMSE?

The BBC is broadly supportive of Ofcom's technical and coverage analysis of the possible alternatives to Channel 69 for PMSE. However we believe that Ofcom's analysis overestimates the viability of interleaved spectrum as an alternative to Ch69. In particular, we do not believe that current shared use in Ch69 could be safely replicated in interleaved spectrum, because of the potential interference with DTT. We also believe that interleaved spectrum would not be an alternative for equipment used by those with hearing difficulties.

Extensive use of interleaved spectrum will need to continue to be made by PMSE anyway and relying solely on this rather than identifying a single nationwide channel (such as Ch38 to replace Ch69) would inevitably lead to a diminution of availability.

We do not currently have certainty on the likely levels of usage of Ch39/40 following the rearrangement so we are not certain of the assertion that these channels are likely to be as lightly used as Ch67/68 previously were. On this basis, we cannot yet say whether the use of Ch38-40 would be a like-for-like replacement for Ch67-69.

Question 10. Do you agree with our economic assessment of the realistic alternatives to channel 69 for PMSE?

It is difficult to comment meaningfully on Ofcom's economic assessment, in the absence of having seen how Ofcom has arrived at its opportunity cost estimates. The BBC understands that this information will be included in Ofcom's second consultation document on the band manager award, which is currently due to be published "early in the spring".

However, Ofcom's broad conclusion that the opportunity cost of Channel 38 is likely to be lower than that of the interleaved spectrum seems reasonable, given current restrictions on use of Channel 38 in the UK, due to its use in the Netherlands by radioastronomy.

The BBC would urge Ofcom to do a similar assessment of the realistic alternatives to channel 69 for the use of equipment used by those with hearing difficulties.

Question 11. Do you agree that channel 38 is the best alternative to channel 69 for PMSE?

The BBC does agree that Channel 38 seems to be the best alternative to Channel 69 for PMSE. Further analysis of its long term suitability can only be made once the future users of Channel 37 are known (but DTT in Channel 37 would most likely be the most easy to accommodate). The existing uses of Channel 38 also need to be taken into account.

Question 12. Do you agree that we should award channel 38 to the band manager on the same terms as would have applied to channel 69?

The BBC agrees that (whatever decisions Ofcom may take with regards to other spectrum) Ofcom should award Channel 38 to the band manager as soon as possible, and that this should be on the same terms as would have applied to channel 69- for an indefinite term, subject to revocation after a period of notice given by Ofcom.

Question 13. Do you agree with our proposal to maintain PMSE access to channel 36 on 12 months' notice to cease and to the rest of the cleared spectrum (channels 31-35, 37 and 61-69) until DSO is completed in the UK in late 2012?

The BBC strongly supports this proposal. With regards to the rest of the cleared spectrum (as defined in the question), given that responses from likely bidders in the cleared award suggest that they would not provide new services in the cleared spectrum until it was available UK-wide, requiring PMSE users to vacate this spectrum before the completion of Switchover

seems likely to lead to this spectrum lying fallow, which is unlikely to be efficient use of a valuable resource.

Allowing continued use of cleared spectrum until Switchover also substantially increases the likelihood that compatible PMSE equipment will be available at the time of the London 2012 Olympic Games and Paralympic Games, increasing the amount of spectrum which can be used during the London Games (and relieving the pressure on certain spectrum bands).

The BBC believes that, depending on Ofcom's economic assessment of the realistic alternatives to channel 69 and feedback from users, Ofcom may also need to allow use of equipment used by those with hearing difficulties in these bands.

Question 14. Do you agree with our approach to determining eligibility for, and our assessment of the level of, funding to move PMSE from channel 69?

The BBC broadly agrees with Ofcom's approach to determining eligibility for funding. However, we have two comments to make with regards to the possible criteria to be satisfied for initial consideration as to entitlement, given in 5.70.

First, wireless microphone users continue to face uncertainty as to the channels they will be able to use in future for wireless microphones, and how much spectrum will be available in such channels, and will continue to do so until Ofcom makes a decision. We would therefore ask that assistance also be given for equipment purchased after the publication of Ofcom's consultation document (2 February 2009) and until such time as Ofcom makes clear which channels will be available for use in future and how much spectrum will be available in each.

Second, the BBC typically uses wireless microphone equipment purchased for about 15 years (and our understanding is that the hire companies we use do also), and hence an assumption that the full lifecycle of equipment from the date of its original purchase is 10 years seems unrealistic.

The BBC does not feel in a position to meaningfully comment on Ofcom's assessment of the level of funding needed to move all (licensed) wireless microphone users from channel 69.

The BBC believes that, should the decision be taken to move use of equipment used by those with hearing difficulties from channel 69, Ofcom will need to consider also offering funding to those affected. We believe that users of such equipment will be best placed to comment on Ofcom's approach to determining eligibility for, and the level of, such funding.

Question 15. Do you agree that three years is long enough for PMSE to move from channel 69?

The BBC believes that three years is likely to be the shortest reasonable period for PMSE to move from channel 69. However, we would urge Ofcom to make clear as soon as possible which channels will be available for use in future and how much spectrum will be available in each, such that users of wireless microphones can begin transitioning from channel 69 as soon as possible.

We would need to understand more about the likely numbers of deployed radio-microphones in Channel 69 and the ability of suppliers to gear up to replace all this equipment before we could be confident that the three year period is achievable. In particular, we are not in a position to speak for shared users, such as in theatres.

Users of equipment used by those with hearing difficulties may similarly need a transition period to move from channel 69 and we are unable to assess whether a 3 year period is realistic in this case.

Question 16. Do you agree with our analysis of the key impacts of our policy options? Are there any other key impacts we should assess?

The BBC believes it is premature to respond to this question, and that a full impact assessment should be done when there is more clarity on the programme and changes required.