

## **DIGITAL MOBILE SPECTRUM LIMITED (“DMSL”)**

### **RESPONSE TO OFCOM CONSULTATION ON THE AWARD OF THE 700 MHz AND 3.6 3.8 GHz SPECTRUM BANDS (“the Consultation”)**

#### **EXECUTIVE SUMMARY**

This document contains DMSL’s feedback to Section 8 of the Consultation.

DMSL agrees with and supports the approach advanced by Ofcom in the Consultation to viewer support for 700 MHz coexistence. Given its significant experience in modelling interference and providing viewer support for 800 MHz coexistence, DMSL agrees that an operationally flexible consumer support scheme is the most effective approach to address undue interference experienced by viewers and allow 700 MHz coexistence. DMSL also believe that such a 700 MHz licensee-led collaborative approach would also enable the efficient and positive delivery of such a scheme.

DMSL agrees that a very important consideration in setting an approach for 700 MHz coexistence must be for the final solution *not* to adversely affect rollout of mobile services in the 700 band. DMSL also strongly concurs that the requirements of any scheme should be limited to DTT interference cases specifically related to mobile services in the 700 MHz band.

The four UK mobile network operators (EE Ltd, Hutchison 3G UK Ltd, Telefónica UK Ltd and Vodafone Ltd), as shareholders of DMSL, asked DMSL to respond to this Section 8 of the Consultation on their behalf. The MNOs agree with the contents of this response.

#### **BACKGROUND TO DMSL**

Established in 2012, DMSL supports the interference-free use of radio spectrum in the UK. The company was set-up to run the “at800 support programme” and has successfully managed this work since 800 MHz services began operating in the summer of 2013. DMSL continues to run the 4G/TV mitigation support scheme-allowing coexistence between mobile services operating in the 800 MHz band and DTT with the brand “at800” and also supports 700 MHz clearance work.

DMSL’s operations include interference modelling, targeted communications, contact centre and field support. Its expertise is providing highly targeted marketing communications activity and outstanding customer service delivered by experts who ensure the successful coexistence and reception of digital services using UHF spectrum.

EE Ltd, Hutchison 3G UK Ltd, Telefónica UK Ltd and Vodafone Ltd are the shareholders of DMSL.

**THIS DOCUMENT CONTAINS DMSL'S FEEDBACK TO SECTION 8 OF THE CONSULTATION.**

**OFCOM'S ORIGINAL QUESTIONS AND BACKGROUND ARE IN ITALICS.**

**Question 7: Do you agree with proposed approach to coexistence in the 700 MHz band?**

***Support for Option 3***

DMSL agree with Ofcom's preferred choice to adopt a less rigid approach to enabling coexistence in the 700 MHz band. DMSL agrees that option 3 provides both a scalable and proportionate approach to supporting viewers who may suffer undue interference with the rollout of 700MHz mobile services. Implementing such support through a jointly coordinated plan developed by 700 MHz licensee holders and implemented by DMSL is an efficient and operationally sensible way to address potential interference issues for the reasons set out below and in this response:

- As Option 3 is comparable to the evolved and successful approach currently applied to viewer support for 800 MHz, DMSL believes that the benefits of adopting a similar approach for 700 MHz will enable the application of tried, tested and improved measures for addressing interference issues (this is evidenced by the high customer satisfaction rates achieved for 800 MHz coexistence).
- As is evident from the experiences of DMSL with 800 MHz coexistence, the success of such a scheme requires the ability to identify impacted viewers based on known roll out plans and mast activations and to track individual viewer and property journeys with visibility of activity in real time and in a coordinated end-to-end manner. As such, engaging one provider to manage a single scheme on behalf of all 700 MHz licensees who can then provide such end-to-end support and allows all data relating to the support and activity to be coordinated without waste and duplication is a sensible approach. Using one provider such as DMSL would also enable such support to be undertaken in a transparent, reliable and consistent manner with the security of knowing that it has a proven and successful history of providing almost identical services.
- Given DMSL's experiences with 800 MHz support, DMSL is able to manage the fact that the number of consumers contacting any support scheme will as a matter of course always be higher than those directly impacted (see comments on "*Mitigation cases for 800 MHz interference*" below). To offer effective support, and particularly to ensure support to vulnerable consumers, a successful scheme needs to be sufficiently flexible to adapt to accommodate and efficiently manage such ancillary traffic. It also needs to be experienced enough to adopt approaches to minimise this "traffic" without compromising on its objectives. DMSL believes that option 3 is the most practical and efficient means to achieve this.
- The MNO shareholders of DMSL and DMSL are confident that a joint plan is readily able to be agreed as part of Option 3 and see no need for "fall back" regulation to be mandated.

DMSL strongly support the principle that any DTT viewer support scheme must be proportionate to the expected scale of disruption. It must also be flexible to allow it to scale should estimates be too low, too high, or condensed or extended based on the speed of 700 MHz deployment. These are fundamental principles to ensure that such a scheme will match the size of any issue and is not unnecessarily costly or disproportionate to potential 700 MHz licensee holders. Nor should it in any way adversely affect rollout of mobile services in the 700 band.

### ***Scheme Notice Section 8.66***

With respect to the language set out in Section 8.66 concerning the “Scheme” and the “Scheme Notice” DMSL has the following comments:

- DMSL considers it fundamental that the actual text of the Scheme Notice should ultimately be agreed between the 700 MHz licensees, the appointed support provider and Ofcom in accordance with the joint plan that is approved;
- Taking on board Ofcom comments regarding cost and proportionality, DMSL do not think that interference mitigation obligations on 700 MHz licensees should continue indefinitely. An unlimited onerous commitment would indeed be an important consideration in any 700 MHz spectrum bid. DMSL considers that a time limit of no more than 5 years should be applied which it considers ample time to address any coexistence issues that may occur;
- DMSL would recommend that any joint plan agreed between 700 MHz licensees provides a timeline for set up of the scheme against any rollout start date(s) for 700 MHz. This is to ensure that necessary pre-requisites to administer the scheme can be put in place in readiness for 700 MHz rollout activity commencing.

### ***Comments on other Options***

DMSL consider that Ofcom’s first option – requiring both 700 MHz licensees and broadcasters to provide support – gives rise to the risk of consumer confusion and inconsistent support. The appointment of a single provider who is able to view interference and support on an end-to-end basis and who is responsible for delivery of such support eliminates such risks.

DMSL agrees with Ofcom that the second option – a rigid prescriptive approach - could be counter-productive to resolving interference issue in an efficient manner. As is evidenced by the experience of 800 MHz coexistence, an overly rigid scheme would actually limit that scheme’s ability to adjust and scale to real demand. Equally, adjusting an overly rigid scheme to account for real life lessons would result in delays to DTT viewer support because of the time it would take to implement whatever necessary operational, legal and regulatory changes to allow for solutions to be applied flexibly. DMSL therefore see Option 2 as potentially causing more harm to consumers and delaying the positive resolution of DTT interference.

### ***Comment on mitigation cases for 800 MHz coexistence***

Section 8.15 of the Consultation incorrectly states the number of cases where mitigation for 4G at 800 MHz has been necessary to restore DTT services. For clarity, it is important to note that as of December 2018, those unique properties supported by the at800 programme such that DTT interference was deemed to be positively addressed are estimated at 264,100. This figure is based on those households where:

- (1) an installer or audit visit confirmed 4G interference (24,900 cases)
- (2) a filter was sent as a first response resolution who confirmed the filter had resolved their TV viewing issues (61,500 cases); and
- (3) the number of communal households assisted with a communal filter (177,700 cases).

It is also important to note that as with any support scheme there was also ancillary work that was undertaken, particularly at the outset (which in part was driven by the application of a rigid rather

than flexible approach, hence the support for Option 3). By way of example the actual number of calls/contacts handled by the DMSL contact centre as at December 2018 was 531,100. Some 92,100 standard filters were sent reactively, along with 6,800 communal filters. 68,400 households were visited. Note that these filter figures exclude the 977,300 proactive filters sent at the start of the 800 MHz mitigation programme.

**Question 8: Do you have any comment on the proposed licence obligation and guidance note (Annex 19).**

The following comments are provided in relation to both Section 8 of the Consultation document and the draft guidance on 700 MHz band coexistence in Annex 19.

***The viewers Ofcom expect the 700 MHz licensees to assist (Sections A19.6 to A19.10)***

In order to ensure any solution is both fair and proportional given the obligations and responsibilities of 700 MHz licensee holders, DMSL consider that it must be clear that any adopted viewer support scheme is limited to DTT interference cases specifically related to mobile in the 700 MHz band. The positive identifying of these viewers through the adoption of a simple yet comprehensive triage process – similar to that adopted by DMSL for 800 MHz coexistence and adapted for 700 MHz clearance - would ensure the correct advice and support is provided to such viewers. Further, identifying viewers with TV viewing issues *unrelated* to 700 MHz mobile services will equally be key for any scheme to remain proportional.

DMSL outline below its views on the viewers DMSL expect the 700 MHz licensees to be responsible for assisting:

- DMSL recommend that all DTT viewers should be offered advice and assistance from a viewer support programme. Whilst sections 8.26 to 8.37 of the Consultation and paragraphs A19.6 to A19.10 in Annex 19 outline the main viewer groups that would likely seek help from a viewer support programme, not all viewer groups that search out support are covered.
- DMSL’s suggested support provision for the various viewer groups would be consistent with that being used for 800 MHz today, as set out in the table below:

Viewer Type	Mailing	Advice	Filter	Home Support
Vulnerable viewers	Y	Y	Y	Y
DTT Only – Rooftop (inc. loft) aerial	Y	Y	Y	Y
DTT Any viewers	Y	Y	Y	
DTT Only – Set top aerial	Y	Y	Y	
Communal viewers	Y	Y	Y	
Businesses		Y		
Accommodation providers		Y		
Care Homes		Y		

- DMSL recommend that viewers who are not reliant on DTT services or who are using indoor aerials (and therefore not eligible for in home support) should, as a minimum, be offered a filter. Should this not resolve viewing issues such viewers would be signposted to accredited and trained installers for further support. This approach would be largely replicated for communal households.

- DMSL recommend that any scheme is supported by the similar viewer transparency and support mechanisms adopted for 800 MHz. For example, the availability for viewers to access a description of services (akin to the code of service for 800 MHz and 700 MHz clearance) and have access to a transparent complaints and escalation process in the event that realistic expectations are not met.
- Consistency of support and advice is key for the success of such a scheme. DMSL therefore supports the appointment of one provider who is able to front face consumers and back-end manage third party providers in a seamless coordinated manner.
- Given the likely continuance of DTT services in the 700 MHz centre-gap until supplementary downlink services commence, ensuring the appropriate handling of viewers who, with a 700 MHz filter, may lose access to such services is an important future consideration that could be taken into account in any jointly proposed plan for coexistence.

### ***SPECIFIC GUIDANCE (WITH REFERENCE TO ANNEX 19)***

#### ***Engaging with consumers***

##### ***Advice Line (Sections A19.13 to A19.15 of Annex 19)***

- DMSL support the operation of an advice line that viewers can contact to provide an easily accessible source of information. However, DMSL consider a multi-channel approach to be more effective comprising of telephone access, website, email and social media channels. This would then enable viewers to access support in the most appropriate way for them. Particular care would be taken to ensure services are accessible to vulnerable groups who DMSL recognise are proportionally more heavily reliant on DTT as an entertainment and communications medium.
- DMSL agree with Ofcom's assessment that multiple advice lines run by different bodies would cause confusion for viewers. Whilst any viewer support scheme would work closely with other sources of TV support to ensure that viewers' issues are triaged appropriately and viewers correctly directed to the most relevant place for support, the appointment of a single provider to manage this process on an end-to-end basis would ensure consistent and coordinated support. It is recognised that such an approach may include sharing certain tools with other support providers so that they are able to triage initial contacts. An example of such a tool that DMSL currently deploy is active mobile mast proximity lookup used by the Freeview Advice Line and BBC Contact Centre to assist in diagnosing the potential for disruption caused by 4G at 800 MHz and allow for handling by DMSL.

##### ***Advertising and communication (Sections A19.19 to A19.21 of Annex 19)***

- A19.18 of Annex 19 sets an expectation for a viewer support scheme to communicate proactively with viewers with confirmed cases of 4G interference where such viewers previously received assistance from the at800 programme (It is important to note from a privacy perspective that DMSL mail properties generically and not named individuals). DMSL believe this should include those viewers who received a reactive filter for 800 MHz mitigation and those who specifically reported a filter had then resolved interference issues. As referenced in Annex 19, viewer assistance could include an engineer visit and/or the provision of a filter. Proactive communication to these specific properties would need to detail how to request a 700 MHz filter should such viewers experience interference from

mobile services in the 700 MHz band. This will limit the number of filters being sent unnecessarily if viewers TV watching habits have changed.

- DMSL is able to proactively and reactively manage advertising and communications with respect to DTT interference. As part of the joint plan agreed by the 700 MHz licensees, the support scheme would run an integrated communications programme both at the launch and during the roll out of 700 MHz mobile services. An integrated marketing approach would ensure consumers have the opportunity to see a consistent message across different media at the same time in addition to building consumer support awareness.
- DMSL believe that the 700 MHz mobile coexistence scheme should deploy a range of social media mechanisms including public relations, direct marketing (e.g. postcards in a similar vein to those used for 800), advertising (above-the-line and below-the-line), social media posts, public affairs, local authority and social housing communications, and charity communications. Such mechanisms would be described further in the joint licensee plan and would include website, Facebook and Twitter profiles and the use of informative videos.
- The adoption of a successful communications campaign would also be location led which has worked successfully with 800 MHz interference mitigation. By way of example for 700 MHz mobile, an upweighted campaign may be used, targeting the UKs largest cities combined with a local approach to ensure consumers living outside of major towns and in rural areas are aware of the potential of undue interference and the consequential provision of DTT viewer support.
- DMSL would not recommend the use of TV advertising or any channels of pop up messaging as a means of communication as this would cause consumer confusion (particularly in areas where such advertising is viewed but roll-out has not occurred) and hamper the effectiveness of operational support to those areas that are affected at that time. The cost of TV advertising would also be significant and disproportionate to the anticipated potential scale of undue interference from 700 MHz rollout.
- Consideration could be given during the preparation of communication mailings to identify properties who have previously received DTT interference assistance and whether 700 mitigation support would include provision for returning at800 filters being replaced. However, any new support scheme should differentiate proactive communication between viewers who accessed at800 support and those who have not and the cost implications of providing such support should be taken into account.
- DMSL would support a cost modelling exercise followed by further discussion with Ofcom once the requirements of the scheme are more concrete.

### **Assisting consumers who experience undue interference to resolve it**

#### ***Providing filters (Sections A19.19 to A19.21 of Annex 19)***

- Ofcom suggest at A19.8 that DTT viewers with paid TV services should be signposted to retailers in order to get a filter to resolve their viewing issues. DMSL believes that this is not the right approach, as it would create a difficult process to operationally manage, administer, and potentially result in an unnecessarily greater level of support being required for consumers than if this process was managed more efficiently at the outset. Given its experience with filter provision for 800 MHz, there would be issues identifying which

retailers, if any would look to stock these filters what the specification or quality of the product would be and what the costs implications would be (e.g. would retailers have an expectation of profit?). In addition, such an approach would require consumers to incur a personal charge to resolve the issue in addition to the increased risk of customer confusion regarding types of filter (as is acknowledged at A19.19).

- DMSL believes it is overall more efficient for a viewer support scheme to provide filters to any household where DTT is used in the first instance.
- As outlined in A19.20 DMSL agrees that filters should be offered to viewers, as a first point resolution and that this be extended to be consistent with the voluntary at800 scheme being provided today – which would therefore include those with Pay TV services, indoor aerials and – importantly – the provision of communal filters. Viewers with Pay TV services, indoor aerials or communal systems would be signposted to accredited independent installers for further support should a free filter not resolve their issue.
- DMSL consider that the provision of in-home support as suggested in A19.21 should be limited to those viewers who are vulnerable, and those who rely on DTT TV services and have a rooftop or loft aerial. Where an eligible viewer (vulnerable or DTT reliant) is unable to fit a filter and / or has external aerial amplification or has attempted to install a filter but issues remain, then an in-home visit could be offered. This would provide a cost-effective and timely method to allow the majority of viewers experiencing interference issues to resolve problems quickly and independently. Since the “filters first” option was introduced in Jan 2018 as part of the at800 programme, only 13% of those viewers sent a filter required physical visit support.

#### ***Helping vulnerable consumers (Sections A19.22 to A19.26 of Annex 19)***

DMSL support the requirement to make specific arrangements to communicate with vulnerable consumers and consider this one of the most important part of a joint plan advanced by the 700 MHz licensee holders. Such a plan would include the following mechanisms that have been successfully adopted and remain in use for 800 interference support and 700 MHz clearance support:

- The provision of specific training for all staff in working with vulnerable viewers;
- Proactive communication with third sector organisations (voluntary and community organisations - both registered charities and other organisations such as associations, self-help groups and community groups);
- The implementation of an upweighted level of awareness activity and potential experiential activity for the initial launch of 700 MHz mobile services which would in turn enable coordinated communication to national and smaller organisations in a timely manner;
- The training of contact centre staff, particularly with respect to how to engage with viewers differently where the viewer may find an often-technical triage process difficult and in some instances distressing and how to determine those that would require additional support without asking prescriptive questions about potentially sensitive personal information.
- The training of installers and auditors who attend viewers’ properties (combined with annual enhanced DBS checks for such providers).

- The flexibility for standard triage outcomes to be bypassed should be built into the advice line and in-home support processes so that upon identifying that, a viewer may need or benefit from additional support, scheme staff can put appropriate support in place to resolve that viewer's interference issues easily and without undue delay.
- The adoption of tools such as text-talk or translation services.
- The ability to be flexible in the provision of appointment times to enable attendance by vulnerable consumer "chaperones" i.e. friends and family.

### **Operational Functions (Sections A19.27 to A19.30 of Annex 19)**

#### ***Tracking Performance***

- The monitoring of activity and performance is vital to ensure the viewer support scheme provides a quality service to consumers but also to ensure that the scheme is proportionate and as cost effective as possible. Over the lifetime of the at800 programme, performance monitoring has allowed DMSL to ensure viewers are supported correctly and in a timely manner whilst providing data upon which more cost-effective options to provide support could be founded.
- The viewer support scheme should ensure that any viewer related interaction or activity could be recorded, monitored and measured. Data relating to a viewer's end-to-end journey with the scheme should be managed in one central repository meaning the support and activity undertaken for any viewer or the scheme as a whole is transparent, reliable and readily available to respond to.
- All elements of the operational process should have internal checks associated with them.
- DMSL agree that the same tracking mechanisms that are in place for the at800 mitigation programme and 700 MHz clearance viewer support programme should be considered for the 700 MHz mitigation viewer support scheme. These include:
  - Mailings are measured from request to completion (processing to Royal Mail from the fulfilment house);
  - The tracking of telephone contact in terms of time to answer, abandonment rate and average handling time;
  - The tracking of filter requests through a request submission process at the contact centre to the completion via the fulfilment house;
  - In-home visits are tracked from creation (booking via the contact centre), to acceptance by an installer through to completion confirmations following visits;
  - The obtaining of customer feedback, recorded and tracked in terms of time to respond and outcomes.
- Alongside such transactional checks and balances, DMSL consider that further quality checks should be applied to ensure viewer expectations are met as are required technical standards. These would include:
  - Call monitorings;
  - In-home technical audits;

- Viewer satisfaction surveys;
  - Reporting on programme objectives e.g. on a monthly basis to be able to quickly identify emerging issues or trends that may require the scheme to adapt.
- The KPIs and SLAs outlined in A19.28 align with those identified by DMSL as being the key measures against which to track performance for 700 MHz clearance. However, customer satisfaction results also provide valuable metrics to gauge if viewers consider they receive a positive outcome to their initial request for support or advice.

#### **Complaints (Sections A19.31 to A19.32 of Annex 19)**

- Should Ofcom consider the engagement of an independent ombudsman useful DMSL note that CISAS is currently used by the at800 programme currently. Note that there have only been 18 cases raised in the life of the at800 programme (with four partially upheld) and although useful any requirements should be proportional to its use.
- DMSL recommend that any viewer support scheme also allow for managing and co-ordinating complaints from channels other than directly from viewers. For example, a consistent approach to managing complaints from media, MPs and via stakeholders or licensees is preferable and action therefore able to be co-ordinated e.g. for the likes of site lockdowns to resolve issues for groups of viewers if required.

#### **Funding and management (Sections A19.33 to A19.34 of Annex 19)**

- In order to provide certainty for potential bidders on 700 MHz licenses in the operation of such a scheme, DMSL believe it is fundamental that Ofcom impose a limit not only to the time period for such support but also to the cost of any 700 MHz viewer support that licence-holders could incur. This would be consistent with 800 MHz, where an upper-limit was set, with any shortfall in requirements for viewer support to be met by government.
- Further funding for viewer support would need to be agreed between the prospective winning bidders prior to the auction. This could, for example, be based on either a fee per MHz of spectrum acquired or be split equally between all holders of 700 MHz spectrum, including any holders of SDL spectrum.

#### **Oversight and Change Control (Sections A19.35 to A19.36 of Annex 19)**

- DMSL agree that – as successfully worked for 800 MHz coexistence - a robust oversight board is formed to monitor and consult on the adopted scheme's implementation and engage with key stakeholders. Given the anticipated scale of 700 MHz interference, such an oversight board could comprise a smaller group comprising of both licensees and broadcasters. This is how the governance process currently being deployed for ongoing 800 MHz mitigation operates and the constitution of such a group ensures that resolution is being sought taking into account all stakeholders with DTT viewer interest at its heart. Such an oversight board would also take responsibility for changes to the scheme that may affect costs or viewer experience.
- DMSL support the inclusion of a managed change control process to ensure any proposed or identified changes to mitigation are properly assessed for impact and benefit across the entire scheme as well as appropriately planned before any implementation is undertaken. In some instances, trials may be implemented to test proposed changes before these are accepted into business as usual processes. Such operational changes would be far easier to manage and implement in a flexible scalable scheme than a rigidly imposed one. The

processes around the change control procedure would be further developed in the joint plan advanced by the 700 MHz licensees.

### ***DMSL ADDITIONAL COMMENTS ON ANNEX 19***

This section provides additional comments for areas not addressed in the Consultation/Annex 19.

#### **Scheme Planning / Forecast**

- Understanding of roll out plans is important to manage the scale of activity the scheme is required to support as well as the geographical areas where support may be required.
- The notification process used by the mobile network operators and DMSL in the at800 programme was refined over time to ensure mobile operators were not inhibited from activating sites but provided consistent and secure information with regard to planned site activations to allow the programme to proactively plan and undertake required operation activity to be able to support viewers followed by site activation information so that triage processes could utilise accurate information to diagnose real interference issues when viewers did make contact. This approach would also be important in the 700 MHz co-existence scheme.

#### **Modelling**

- Annex 19 does not refer to how viewers who are at risk of interference be identified. It is important in engaging with viewers, that the scheme is able to identify those at risk of interference in order to communicate with, triage and provide appropriate support.

#### **Agreed level of service restoration**

- Appropriate and reasonable funding limits to be agreed for service restoration and to manage those increased costs incurred when undertaking additional measures to restore services for example access cases, change requests, change where for example standard aerial installation/replacement is possible. Given cost consideration and the principle of proportionality. DMSL consider service restoration costs would be significantly less than that applied for 800 MHz restoration work.

#### **Pilots**

- A suggested approach to trying to understand the scale of the issue the scheme may encounter, would be to operate a number of pilots to validate assumptions and test real life examples as well as try to better understand viewer expectations and needs around what support they would seek out.
- Such pilots could cover known 4G impacted areas as well as other urban and rural areas. A co-ordinated activation could be planned with mobile operators alongside targeted communications and consumer research in that area followed by providing support to volunteering households for filter fitting with in home support if required and subsequent readings to confirm if interference is as expected in those areas.