

## Section 1

# Executive Summary

- 1.1 This Statement sets out our decisions for the Auction of wireless telegraphy licences for the use of 790 to 862 MHz (the 800 MHz band) and 2500 MHz to 2690 MHz (the 2.6 GHz band). The decisions set out in this statement will be given effect to by auction regulations, a draft of which is published with this Statement. In making the decisions in this Statement we have had regard to our statutory duties and the Government's Direction to Ofcom<sup>1</sup> (the Direction).
- 1.2 This Statement follows a number of consultations by Ofcom. We have consulted twice on the Auction: first in March 2011<sup>2</sup> (the March 2011 consultation) and again in January 2012<sup>3</sup> (the January 2012 consultation). We have also consulted specifically on technical licence conditions in June 2011 (the June 2011 TLC consultation) and on the co-existence of the Digital Terrestrial Television (DTT) with mobile use of 800 MHz spectrum, first in June 2011 and again in February 2012.
- 1.3 We received responses to all these consultations from stakeholders expressing a wide range of views on issues on which we consulted, and providing considerable analysis and evidence in that regard. In reaching the decisions set out in this document, we have considered all these stakeholder responses.
- 1.4 The Statement covers:
- i) our assessment of likely future competition in markets for the provision of mobile electronic communication services after the conclusion of the Auction of 800 MHz and 2.6 GHz bands and our analysis of whether we should put in place appropriate and proportionate measures in the Auction to promote competition;
  - ii) our consequent decisions as to rules in the Auction and other aspects of the auction design;
  - iii) the reserve prices that we propose will apply in the Auction;
  - iv) our coverage decisions in relation to measures to promote the widespread availability of next generation mobile broadband services, by which we mean high quality mobile data services, throughout the UK; and
  - v) our decisions on the technical and non technical licence conditions that will be included in the licences to be granted. These include a set of conditions designed to ensure that mobile use of the 800 MHz band can co-exist with neighbouring DTT use.
- 1.5 This document also contains an update on our likely approach to the revision of annual licence fees payable after the Auction in respect of existing 900 MHz and

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<sup>1</sup> The Wireless Telegraphy Act 2006 (Directions to OFCOM) Order 2010 (S.I.2010 No. 3024) which can be found at: <http://www.legislation.gov.uk/ukxi/2010/3024/contents/made>

<sup>2</sup> "Consultation on assessment of future mobile competition and proposals for the auction of 800 MHz and 2.6 GHz spectrum and related issues", dated 22 March 2011.

<sup>3</sup> "Second consultation on assessment of future mobile competition and proposals for the auction of 800 MHz and 2.6 GHz spectrum and related issues", dated 12 January 2012.

1800 MHz licences (in respect of which we will not be making any decisions until after the Auction).

- 1.6 We are also publishing an Information Memorandum which provides information for potential bidders in the Auction.

## **Our Statutory Duties and the Direction**

- 1.7 We have taken the decisions outlined in this Statement pursuant to our statutory duties and the Direction.
- 1.8 Our principal duties under the Communications Act 2003 are to further the interests of citizens, and the interests of consumers, where appropriate by promoting competition. In doing so, we are also required (amongst other things) to secure the optimal use of spectrum, as well as to have regard to the desirability of securing the availability and use of high speed data transfer services through the United Kingdom, the desirability of encouraging investment and innovation, and the interests of consumers in respect of choice, price, quality of services and value for money.
- 1.9 The Direction requires us:
- to assess likely future competition in markets for the provision of mobile electronic communication services after the conclusion of the Auction of 800 MHz and 2.6 GHz bands;
  - in the light of that competition assessment, where we think fit, to put in place appropriate and proportionate measures (which may include rules governing the Auction) which will promote competition in those markets after the conclusion of the Auction;
  - to hold an Auction of the 800 MHz and 2.6 GHz bands as soon as reasonably practicable after concluding the competition assessment; and
  - to revise the annual licence fees paid for 900 MHz and 1800 MHz to reflect full market value having particular regard to the sums bid for licences in the 800 MHz and 2.6 GHz Auction.

## **Promotion of competition in mobile markets following the Auction**

### **Decisions on promotion of competition**

- 1.10 In our January 2012 consultation we set out our revised proposals on the measures we should take in the Auction to promote competition. Having considered the responses, we continue to believe that the main level in the value chain at which we should promote competition is the national wholesale level. This is because it supports retail competition both directly, as national wholesalers are also major competitors supplying retail mobile services to consumers and; indirectly, via wholesale access provided to other retailers such as Mobile Virtual Network Operators (MVNOs). As a result, we have decided that:
- UK consumers will be likely to benefit from better services at lower prices in future if following the Auction there continue to be at least four credible national wholesalers of mobile services, Therefore, we would be concerned if as a result

of the Auction fewer operators had access to sufficient spectrum to compete credibly at the wholesale level in the future than is currently the case in the UK;

- it is likely that this would be the case if neither Hutchison 3G UK (H3G) nor a new entrant acquires at least a minimum amount of spectrum in the Auction.<sup>4</sup> Absent intervention, there is a material risk that neither H3G nor a new entrant would acquire this minimum amount of spectrum in the Auction;
- given the nature and extent of their current spectrum holdings, we do not have the same level of concern in regard to Everything Everywhere, Telefónica or Vodafone, even though they may well be able to offer better or a wider range of services and compete more aggressively if they acquire additional spectrum through the Auction;
- therefore it is in our view appropriate to reserve some of the available spectrum in the Auction for a fourth national wholesaler, by which we mean a bidder other than Everything Everywhere, Telefónica or Vodafone;
- bidders for the reserved spectrum have to compete with each other, but provided that there is at least one such bidder that is willing to pay the reserve price for this spectrum, that bidder is guaranteed to win it. The exact quantities of spectrum that we consider to be proportionate to reserve are set out below;
- because of the level and nature of their current spectrum holdings, and/or the much lower risk that these national wholesalers would fail to acquire further spectrum in the Auction, we do not consider it necessary to reserve any spectrum for Everything Everywhere, Telefónica or Vodafone;
- we also consider that it would be appropriate and proportionate to impose limits on the amounts of spectrum that each bidder can acquire in the Auction, such that their overall holdings of 'mobile spectrum' in general, and sub-1GHz 'mobile spectrum' in particular, do not exceed certain safeguard caps. This is in order to mitigate the risk of highly asymmetric spectrum holdings after the Auction leading to lower competitive intensity.

### Specific measures to promote national wholesale competition

1.11 In the January 2012 consultation, we proposed the following safeguard caps:

- an overall spectrum cap of 2 x 105 MHz; and
- a sub-1GHz spectrum cap of 2 x 27.5 MHz.

1.12 In the light of the responses to the January 2012 consultation and our further analysis, we continue to believe that these caps are appropriate and proportionate. We have therefore decided to set the safeguard spectrum caps at these levels.

1.13 These caps cover all the spectrum in the Auction and existing mobile spectrum holdings (i.e. holdings at 900 MHz, 1800 MHz, and 2.1 GHz, excluding the 2.1 GHz unpaired spectrum as there is currently no commercial use of that spectrum in the UK or, as far as we are aware, elsewhere in Europe).

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<sup>4</sup> Unless they acquired sufficient spectrum by other means before the auction.

- 1.14 In the January 2012 consultation we also considered a number of alternatives for the amount and frequencies of spectrum that should be reserved for the fourth national wholesaler. We then set out the specific groups of portfolios that we considered to be proportionate.
- 1.15 Having considered the responses to the January 2012 consultation and undertaken further analysis we have decided that we should make some modifications to these portfolios. The portfolios we have decided to reserve for the fourth national wholesaler are set out in Table 1.1 below.

**Table 1.1: Spectrum portfolios for the fourth national wholesaler**

<b>Portfolio</b>	<b>800 MHz</b>	<b>1800 MHz</b>	<b>2.6 GHz</b>
1	2 x 15 MHz		
2	2 x 10 MHz		2 x 10 MHz
3	2 x 5 MHz	2 x 15 MHz	
4		2 x 15 MHz	2 x 20 MHz

- 1.16 We consider that any one of these portfolios would be likely to be sufficient for a fourth national wholesaler to be capable of being a credible competitor.
- 1.17 It is important to note that we do not consider the portfolios to have the same value in terms of prices in the Auction. Different values for the portfolios are likely to be expressed in the Auction partly because the costs of deploying networks will be different in each case. Similarly we do not consider the portfolios necessarily imply precisely the same business model by which a national wholesaler could compete. Rather, our position is that if a fourth national wholesaler held any one of these portfolios it would have sufficient spectrum holdings to be capable of being a credible national wholesaler.

#### Promoting new entry by sub-national operators

- 1.18 In our January 2012 consultation we said that we were minded to favour reservation of 2x10 MHz of 2.6 GHz spectrum for low power shared use by operators of sub-national Radio Access Networks, but we noted that this was a difficult judgement.
- 1.19 In light of the responses to the January 2012 consultation and our further analysis we have decided not to reserve spectrum for such use, because of the relatively certain and significant costs compared to the more uncertain benefits of doing so. While it is possible that entry by sub-national operators could deliver substantial benefits to consumers this remains uncertain. By contrast there seems to be a more certain cost to reserving spectrum which is the cost of denying access to the spectrum for standard power use for increased capacity and higher average data rates and, possibly in some cases, deployment of LTE networks (if other spectrum is unavailable to a particular national wholesaler).
- 1.20 We have therefore decided that those who wish to acquire spectrum for low power use will have to compete against those who wish to use it for standard power use. We are putting in place specific rules in the Auction to allow for this competition to take place through aggregation of the bids made by low power bidders.

## Promoting the wide availability of future mobile services for citizens and consumers

- 1.21 In both the March 2011 and January 2012 consultations we recognised that the Auction of 800 MHz and 2.6 GHz spectrum had an important role to play in promoting the wide availability of future mobile services in the UK. We suggested that our proposals to promote competition were likely to drive wide availability but felt that they should be underpinned by a minimum coverage obligation to ensure that a future mobile broadband service would be provided to a significant proportion of citizens and consumers on a reasonable timescale.
- 1.22 In the light of the consultation responses we received and the further analysis we have conducted, we have decided to include a coverage obligation in one of the 800 MHz licences. The obligation will relate to 2 x 10 MHz of spectrum. It will require the licensee to provide a mobile broadband service for indoor reception to users in an area within which 98% of the UK population live<sup>5</sup>. We anticipate that this would be likely to lead to outdoor coverage in an area within which over 99.5% of the UK population live.
- 1.23 In addition to imposing the above requirement in relation to UK-wide coverage, we have also decided to require that the same licensee provide the same service to an area within which at least 95% of the population of each of the nations live. We consider that a network meeting this obligation would be likely to provide outdoor coverage to an area within which 98%-99% of the population of each of the nations live.
- 1.24 Both obligations will need to be met by 31 December 2017. We believe that they will ensure that virtually all consumers and citizens of the UK have some access to next generation mobile broadband services within a relatively quick timeframe, which will create substantial citizen and consumer benefits.
- 1.25 We have decided that it would be proportionate to include these coverage obligations in only one licence. While we recognise there is value to consumers from having a choice of provider we do not regard it as proportionate in this context to bring this about through regulation. We consider it entirely possible that competition amongst providers will mean that operators not subject to the coverage obligation will nevertheless build networks with similar coverage. Further, even if such competition does not develop for some time or completely, we do not consider there is a serious risk that consumers in the areas only served by the holder of the coverage obligation will face unreasonably high prices, given the prevailing practice of national pricing for mobile services.
- 1.26 We have also decided that it would not be proportionate to impose an access obligation on the holder of the coverage obligation, as we believe this could be damaging to the incentives to invest and would be difficult to specify, given the need to identify areas where it applied. It could also lead to a poor consumer experience without tightly specified and potentially costly and complex technical obligations.

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<sup>5</sup> The obligation should enable consumers in the vast majority of homes within the coverage area to receive a 2Mbps indoor service. However, the quality of indoor reception depends significantly on the type of building construction, and in a few cases where buildings are both of a challenging construction type and in particularly hard to reach locations, it may not be possible to receive an indoor service of the specified quality.

## Other issues

### Spectrum packaging and auction design

- 1.27 This Statement also sets out our decisions on both how the spectrum will be packaged, and the rules of the Auction.
- 1.28 In the January 2012 consultation we set out two options for the lot structure for the 800 MHz band and indicated a preference for the simpler of the two, but noted that its adoption depended upon our decisions regarding DTT co-existence. In light of the decisions set out in this Statement regarding DTT co-existence, we have decided to adopt the simpler lot structure such that there will be two types of lot for spectrum in the 800 MHz band in the Auction; one for the 2 x 10 MHz lot with the coverage obligation and the other for the remainder of the spectrum (in lots of 2x5 MHz).
- 1.29 As regards the 2.6 GHz band we have decided to adopt the approach we set out in the January 2012 consultation for which there was broad support in the responses. Accordingly the paired spectrum will be packaged in 2 x 5 MHz lots and the unpaired spectrum in 5 MHz lots.
- 1.30 In line with our proposals in the March 2011 and January 2012 consultations we have decided to use a combinatorial clock auction to auction the spectrum. In this Statement we set out detailed decisions in relation to the auction rules. In light of consultation responses and our further consideration of the issues, we have made some modifications to the detailed rules set out in the January 2012 consultation, many of which simplify the Auction.

### Reserve prices

- 1.31 In this Statement we set out our proposed position on reserve prices. We will make a final decision on reserve prices when we make the auction regulations.
- 1.32 Table 1.2 below sets out our proposals for each type of lot in the Auction.

**Table 1.2: Proposed Reserve Prices**

Lot Category	A(i)	A(ii)	B	C	D(i)	D(ii)	E
	800 MHz 2x5 MHz	800 MHz 2x10 MHz (with coverage obligation)	1800 MHz 2x15 MHz (Divestment)	2.6 GHz 2x5 MHz (standard power)	2.6 GHz 2x10 MHz (shared low power)	2.6 GHz 2x20 MHz (shared low power)	2.6 GHz 5 MHz (unpaired)
Ofcom's proposal	£225m	£250m	£225m	£15m	£3m per bidder, £30m threshold	£6m per bidder, £60m threshold	£0.1m

- 1.33 In determining these reserve prices we have taken into account a number of risks including (i) the risk that a fourth national wholesaler would not obtain the spectrum when it would be in the interest of consumers that they did so, (ii) the risk that the spectrum is unsold so preventing it from being put to productive use, and (iii) various risks that bidders engage in behaviours that could reduce the efficiency of the Auction e.g. by tacitly colluding or artificially reducing their demand.

- 1.34 We have based our proposed reserve prices on the evidence of prices paid in auctions in other countries for the same or similar spectrum. To assist us in this task we commissioned Dotecon and Aetha to carry out a study to value the spectrum and make recommendations on reserve prices. We are publishing a non-confidential version of their report alongside this Statement.

### **Licence conditions**

- 1.35 The Statement sets out our decisions on the licence conditions that will apply to the use of the 800 MHz and 2.6 GHz spectrum. These decisions take into account the responses we received to our March 2011 consultation and the June 2011 TLC consultation.
- 1.36 We have decided that the licences will be UK-wide and technology and service neutral. All types of spectrum trading will be permitted for individual standard-power licences, subject to a review of the impact of the proposed trade on competition. In the case of concurrent low-power licences at 2.6 GHz (if any), only those types of trades that do not increase the number of licensees in the band will be permitted. The licences will be of indefinite duration, continuing in force until surrendered or revoked. During an initial period of 20 years our powers to revoke a licence will be limited to specific circumstances, and will not include the power to revoke for spectrum management reasons. Thereafter we will be able to revoke a licence for spectrum management reasons on five years' notice.
- 1.37 The technical conditions reflect the European harmonised conditions supplemented by additional provisions to deal with particular interference issues, namely risk of interference to radars operating in the 2.7 GHz band and interim arrangements to manage the risk of interference to DTT use of the 800 MHz band before digital switch over and clearance is completed. There are also conditions to manage the ongoing risk of interference to DTT use in the neighbouring band as explained below.

### **DTT Co-existence**

- 1.38 New mobile services in the 800 MHz band have the potential to cause interference to the reception of existing DTT services in the adjacent band. This issue is not unique to the UK. Other European countries which have DTT services in bands adjacent to the 800 MHz band face the same issue and are adopting a variety of approaches to mitigate the interference risk. For the UK, our technical analysis indicates that up to 2.3m households might be affected. Approximately 900,000 of these households rely solely on DTT for reception of digital television.
- 1.39 On 2 June 2011, we published a consultation setting out our initial proposals for managing coexistence between existing and new services. We noted that some decisions raised questions of public policy that were properly for Government to take rather than Ofcom.
- 1.40 In February 2012, Government took decisions on how coexistence should be managed. These included decisions on the level of support that would be provided to consumers and on the body that would manage this work, referred to here as MitCo. In the same month, we published our second consultation on coexistence setting out proposals for how these decisions should be implemented. We received 30 responses to this consultation. While respondents were generally supportive of the broad approach, a number of respondents thought the level of consumer support should be increased. We also received detailed comments on the proposals for

establishment and governance of MitCo, as well as the framework for managing MitCo's performance.

- 1.41 In July 2012, Government published a document<sup>6</sup> which confirmed the decisions taken in February and provided further clarifications on areas of detail. Among other things, they have now decided to make an additional provision to assist those households that are likely to find it most difficult to self-install a filter. 800 MHz licensees will be required to set aside £12m of the £180m total allocated for managing coexistence to provide installation support for these households. Additionally, Government has further decided that any under spend of the £180m should be returned in full to the 800 MHz licensees, rather than being split equally between licensees and Government.
- 1.42 Taking into account responses and further discussions with stakeholders and the Government, we have now made decisions on the framework that will be used for implementing Government decisions. This includes the final set of key performance indicators (KPIs) and associated conditions that will be used to manage MitCo's performance. These are set out in the licences that will be issued following the Auction.

### **Annual licence fees for 900 MHz and 1800 MHz spectrum**

- 1.43 The Direction requires us to revise the level of annual licence fees for 900 MHz and 1800 MHz spectrum after the Auction to reflect full market value, having particular regard to the sums bid for licences in the Auction for the 800 MHz and 2.6 GHz bands.
- 1.44 We will consult on our approach to implementing this aspect of the Direction after the Auction and make decisions following that consultation. However, we believe that stakeholders are likely to find some discussion of possible approaches ahead of the Auction helpful. Therefore we provide an update on our thinking on the matter in this Statement.

### **Next steps**

- 1.45 Alongside this policy Statement we are publishing a draft of the auction regulations that give effect to our decisions and which Ofcom must make in order to hold the Auction. We are also publishing an Information Memorandum and the draft licences which will be granted following the Auction. We intend to update both the Information Memorandum, and, as appropriate, the draft licences, before the Auction commences, in order to ensure that potential bidders have the most up to date information available to them at that time. We will also consult on and make further statutory instruments amending (i) the mobile spectrum trading regulations, (ii) the limitations order, and (iii) the register regulations, to give effect to the decisions in this Statement in advance of the Auction.
- 1.46 The consultation on the draft auction regulations will close on 11 September 2012. Following consideration of the responses we plan to make the regulations in the Autumn. We expect to invite applications to take part in the Auction before the end of 2012.

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<sup>6</sup> <http://www.culture.gov.uk/images/publications/letter-dcms-ofcom-10072012.pdf>