

DIGITAL BRITAIN REPORT

A Consultation on a
Direction to Ofcom to
Implement the Wireless
Radio Spectrum
Modernisation Programme

SUPPLEMENTARY DOCUMENT
DECEMBER 2009

INTRODUCTION

1. This document is supplementary to the consultation document, “A Consultation on a Direction to Ofcom to implement the Wireless Radio Spectrum Modernisation Programme”, published by the Department on 16 October 2009.
2. That Consultation Document set out various directions which the Secretary of State proposes to give to Ofcom in accordance with his power to give directions under section 5 of the Wireless Telegraphy Act 2006. The directions proposed were set out at Annex G to that Consultation Document.
3. Since that consultation was commenced, one organisation that has received the Consultation Document has raised two matters concerning the contents of that document. So that the position is beyond any doubt, this Supplementary Document deals with each of them.

DIRECTIONS

4. The first matter is a suggestion that it is insufficiently clear which matters are the ones on which views are sought. The Department has already posted additional information on the “Consultation” section of its website.
5. The Department seeks your views on all the directions suggested in the Consultation Document. The reasons why the Secretary of State proposes to make those directions are explained in the Consultation Document itself. The directions are also listed at Annex G to the Consultation Document. For ease of reference, they are also set out in the table below – see column 3 of the table.
6. In relation to each of these directions the Secretary of State wishes to know whether you agree or disagree with the direction he proposes to give to Ofcom. The Secretary of State is particularly interested to know the reasons why you either agree or disagree. If you think that any of the directions as proposed should be altered, the Secretary of State also wishes to know in what respects you think what he proposes should be changed. If you think any changes should be made, again, the Secretary of State would like to know the reasons why you think a change should be made.
7. The Secretary of State will take into account all responses to the consultation when making his decision on whether to make any directions, and if so what the final form of the directions to Ofcom should be.
8. The Consultation Document published in October 2009 also posed various specific questions both in relation to directions which the Secretary of State proposes to make and in relation to other related matters. These

questions were summarised at Annex C to the Consultation Document. For the avoidance of doubt, the Secretary of State still seeks your views on these matters. On these points too, the Secretary of State is particularly interested to hear the reasons for the views you hold.

A FURTHER MATTER

9. The second point that has been raised with the Department concerns differences between language used by the Independent Spectrum Broker and language in the Consultation Document. For the avoidance of any doubt, in the table below the Department sets out amendments to paragraphs of the Consultation Document: see the fourth column of the table (headed "Comment"). The changes made to the text as it appears in the Consultation Document are shown in italics in column 4. These changes have been made so that the language in the Consultation Document precisely reflects the language used by the Independent Spectrum Broker.

DEADLINE FOR CONSULTATION RESPONSES

10. Please also note that the Secretary of State has now extended the time within which all responses to this consultation exercise need to be received. The deadline for responses is now 5pm on Friday 5 February 2010.

THE TABLE

Table of matters the Secretary of State proposes to include in a direction to Ofcom under s5 WTA

Row number	Con Doc paragraph number	Proposed Direction	Comment
1.	3.24	<p>To liberalise existing 2G (900 and 1800MHz) licences.</p> <p>2G licences to be liberalised in the hands of existing holders, be for an indefinite period, subject to revocation at 5 years notice for spectrum management reasons. Licences to be made tradable and subject to revised fees to be determined by Ofcom after the Combined Auction. Licence holders will have to comply with the process of spectrum defragmentation.</p>	
2.	3.25	<p>To make existing 3G licences for indefinite period subject to:</p> <p>(i) an initial term to 31 December 2021, during which no licence fee is payable.</p> <p>(ii) revocation at 5 years' notice (no such notice to be given before 31 December 2016)</p>	<p>Provision has been included in the Digital Economy Bill to allow for the application of annual licence fees after the expiry of the initial term. Fees to reflect the full market value of the spectrum, Ofcom to consult on this at the appropriate time</p>
3.	3.26	<p>2.1GHz licences to be liberalised and made tradable.</p> <p>Licensees to be obliged to comply with spectrum defragmentation</p>	<p>The text of paragraph 3.26 is clarified to read (clarifications in italics)</p> <p><i>"It is proposed that, the varied 2.1GHz licences will also be liberalised and made tradable in line with existing policy</i></p>

Row number	Con Doc paragraph number	Proposed Direction	Comment
		<p>process. Licensees to be obliged to comply with additional coverage obligations</p>	<p>objectives to encourage the most effective and economic use of the spectrum. They will also oblige the licence holders to comply with the process of spectrum defragmentation (discussed in more detail at paragraph 3.47 below). The Government also will direct Ofcom to apply additional coverage obligations of providing retail services across 90% of the population. The Independent Spectrum Broker suggested that within the coverage area, the owner of the licence must provide a service that would equate to a 90% probability that a user would see a downlink speed in excess of 768kbps in outdoor locations in a lightly loaded cell. Following discussions with Ofcom, the Government believes that further clarification on the specification of the coverage obligation is desirable to reduce the risk of differing interpretations of the term “a lightly loaded cell”. The proposed clarification is that the term “a lightly loaded cell” does not require the licence holder to be able to deliver a downlink speed of 768kbps to all users under all traffic conditions, but licence holders will, none the less, be required to provide a service capable of delivering a sustained downlink speed of 768kbps simultaneously to a small but non-negligible number of users in each area of coverage. The requirement could, for example, be specified as requiring the licence holder to provide a service that would equate to a 90% probability that a user would be able to receive a downlink speed of 768kbps in circumstances where 0.1% of the population in the area are simultaneously downloading data at a speed of 768kbps. <i>The licensee may provide this service using any spectrum band available to them including arrangements made under spectrum or network share agreements.”</i></p>

Row number	Con Doc paragraph number	Proposed Direction	Comment
4.	3.27	2.1GHz coverage levels to be in place by mid-2013. Ofcom to monitor and enforce financial penalties to be applied for failure to meet obligations.	
5.	3.30 – 3.32	Ofcom to conduct a combined auction of 800MHz spectrum and 2.6GHz spectrum. Combined auction to include any spectrum relinquished due to spectrum caps. If combined auction is to be delayed into 2011, TDD portion of 2.6GHz spectrum band to be separately auctioned in 2010.	
6.	3.33	Ofcom to package the spectrum/set bidding criteria as follows: 800MHz – 6 lots of 2 x 5MHz, with a minimum bids required of two lots and maximum bids of three lots per bidder; FDD 2.6GHz – 7 lots of 2 x 10MHz, with a maximum of two lots per bidder; Relinquished FDD spectrum in lots of 2 x 5MHz; TDD 2.6GHz spectrum as one lot of 50MHz	
7.	3.38	Ofcom to impose spectrum caps for the combined auction as follows: A sub-1GHz cap of 2 x 17.5MHz.	

Row number	Con Doc paragraph number	Proposed Direction	Comment
		<p>Where spectrum in excess of this is bid for, then spectrum below 1GHz must be nominated for relinquishment on a 1:1 ratio;</p> <p>A total spectrum cap of 2 x 65MHz of FDD equivalent spectrum below 3GHz;</p> <p>A 2G relinquishment cap, any operator who has more than 2 x 25MHz of 2G spectrum that has been liberalised to relinquish 2 x 5MHz into the combined auction.</p>	
8.	3.40	Caps to be in place for 1 year	
9.	3.41	<p>Spectrum caps to come into force once the Ministerial Direction to Ofcom is laid before Parliament.</p> <p>Sub-1GHz and total spectrum cap to be in place for 1 year after the combined auction, 2G relinquishment to remain in place for the combined auction.</p>	
10.	3.43	<p>Relinquished spectrum to be released in 2 x 5MHz contiguous FDD block and be released from the holdings of a single operator.</p> <p>Spectrum released to comply with the sub-1GHz spectrum cap must be sub-1GHz spectrum, any spectrum can be released to meet total spectrum cap. 2G spectrum must be released to meet 2G relinquishment</p>	

Row number	Con Doc paragraph number	Proposed Direction	Comment
		cap.	
11.	3.44	Relinquished 900MHz spectrum to be cleared and made available for use within 2 years of completion of the combined auction, or 31 st March 2013, which ever is the earlier. Any other relinquished spectrum to be made available within 2.5 years from the completion of the combined auction, or 30 September 2013, whichever is the earlier.	
12.	3.45	No entity is permitted to bid for spectrum in any band in which it is to relinquish spectrum.	
13.	3.46	<p>Conditions will be applied to newly awarded 800MHz and 2.6GHz spectrum (FDD and TDD) and relinquished and re-awarded 900MHz and 1800MHz:</p> <p>Indefinite term; initial term of 20 years with no licence fee payable during that interim term; subject to revocation at 5 years notice for spectrum management reasons, earliest such notice will be given is 15 years from the granting of the licence; subject to an annual licence fee after the initial term; subject to spectrum defragmentation process; 800MHz and relinquished 900MHz</p>	

Row number	Con Doc paragraph number	Proposed Direction	Comment
		<p>spectrum to be subject to retail service and wholesale access conditions.</p> <p>Conditions will be applied to any transferred 2.1GHz licences:</p> <p>Indefinite term; an initial term to 31st December 2021, during which term no licence fee will be paid. Licences to be subject to revocation for spectrum management purposes, such notice will not be given until 31st December 2016 earliest.</p> <p>Subject to an annual licence fee on completion of initial term, Ofcom to consult on the level in due course; subject to spectrum defragmentation process; subject to amended retail service obligations.</p>	
14.	3.47	Ofcom to act in the event that operators cannot reach agreement on defragmentation within 45 working days	
15.	3.48	Additional payments to be made between an entity acquiring any relinquished spectrum and the entity relinquishing the spectrum, to cover costs of clearance. This will be in addition to the payment to Ofcom for the spectrum.	
16.	3.51 – 3.52	Government to set reserve prices for	

Row number	Con Doc paragraph number	Proposed Direction	Comment
		800MHz and 2.6GHz	
17.	3.53	<p>Ofcom to set reserve prices for relinquished spectrum as follows:</p> <p>900MHz spectrum – minimum price of 37.5% of the average price per MHz of 800MHz spectrum in each round of the auction;</p> <p>1800MHz - minimum price of 37.5% of the average price per MHz of 2.6GHz spectrum in each round of the auction;</p> <p>2.1GHz - minimum price of 75% of the average price per MHz of 2.6GHz spectrum in each round of the auction</p>	
18	3.54	Ofcom to allow auction payments for relinquished 2.1GHz spectrum to be reverted back to the entity relinquishing the spectrum. Ofcom to ensure additional payments between operators for relinquished spectrum are made.	
19	3.57	Retail service conditions to be applied to 800MHz and re-awarded 900MHz spectrum as detailed in paragraph 3.57 Ofcom to monitor and enforce these obligations.	<p>Paragraph 3.57 is clarified as follows:</p> <p>“The proposals are:- 800MHz and relinquished and re-awarded 900MHz licences (where any operator <i>acquires at least 2 x 10MHZ</i>) will contain a retail service obligation to provide services to 99% of the population. Within this area, the licence holder must provide a service that would</p>

Row number	Con Doc paragraph number	Proposed Direction	Comment
			<p>equate to a 90% probability that a user would see a downlink speed of 1.5Mbps in a lightly loaded cell. Following discussions with Ofcom, the Government believes that further clarification on the specification of the coverage obligation is desirable to reduce the risk of differing interpretations of the term “a lightly loaded cell”. The proposed clarification is that the term “a lightly loaded cell” does not require the licence holder to be able to deliver a downlink speed of 1.5Mbps to all users under all traffic conditions, but licence holders will, none the less, be required to provide a service capable of delivering a sustained downlink speed of 1.5Mbps simultaneously to a small but non-negligible number of users in each area of coverage. The requirement could, for example, be specified as requiring the licence holder to provide a service that would equate to a 90% probability that a user would be able to receive a downlink speed of 1.5Mbps in circumstances where 0.1% of the population in the area are simultaneously downloading data at a speed of 1.5Mbps. <i>The licensee may provide this service using any spectrum band available to them, including arrangements made under spectrum or network share agreements.</i>”</p> <p>This coverage must be in place within 3 years of the nationwide availability of the entire 800MHz spectrum. Additionally, as an interim measure, the 800MHz licences or the relinquished and re-awarded 900MHz will also contain an obligation to be offering services from a minimum of 750 sites within 1 year of nationwide availability. This level of service must be maintained for at least one year;</p> <p>Ofcom will monitor, and if necessary enforce, the meeting of these obligations. Compliance will be a matter for Ofcom to determine in due course. The Independent Spectrum</p>

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			<p>Broker has set out an approach, but Ofcom has used a slightly different approach in its assessment of compliance with the existing 3G rollout obligations. The Government anticipates that Ofcom will consult in the future on this question to determine the most appropriate approach, but as a technical matter does not believe that this should be the subject of the Direction.</p>
20	3.58	<p>Wholesale access conditions to be applied to 800MHz licences, relinquished and re-awarded 900MHz licences, varied 900MHZ licences.</p>	<p>Paragraph 3.58 is clarified as follows:-</p> <p>“For any newly awarded 800MHz licences and re-awarded 900MHz spectrum in blocks of 2 x 10MHz, there will be obligatory provision of wholesale access to all services deployed in rural areas of the country (designated as being those areas containing the least densely populated 20% of the population of the UK) to any operator that has achieved 70% of national coverage using its own mobile broadband data network. This wholesale access will include the right to resell the wholesale access e.g. as part of roaming arrangements or MVNO agreements. <i>This would be a long term arrangement;</i></p> <p>The Government will direct that varied 900MHz licences will contain an obligation to provide wholesale access to all services deployed on wideband (at least 2 x 5MHz) data carriers in rural areas of country (as defined above) to any operator that has achieved 70% national coverage using its own mobile broadband data network. This wholesale access will include the right to resell the wholesale access. <i>This would be a long term arrangement;</i></p> <p>To take account of any uncertainties in the availability of all the 800MHz spectrum, the licence specifying the highest frequency 2 x 10MHz of 800MHz spectrum will have the following obligation: if only this 2 x 10MHz of 800MHz</p>

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			<p>spectrum is nationally available before March 31 2013, the licensee must offer nationwide wholesale access to the other 800MHz licensees from the beginning of the availability of that band. This wholesale access must be provided on a non-discriminatory basis until six months after the remaining 800MHz spectrum becomes nationally available.</p> <p>The varied 900MHz licences will contain the following obligation: if the nationwide availability of the highest frequency 2 x 10MHz of 800MHz spectrum is delayed beyond 31st March 2013, then these 900MHz licensees will be required to provide to the 800MHz licensees, nationwide wholesale access to all services deployed in a wideband carrier (2 x 5MHz or greater) at 900MHz. This wholesale access will be provided for two years after the entire 800MHz spectrum becomes nationally available. This will include rights for wholesale access resale, in other words operators must not be restricted from reselling capacity to which they have access gained through wholesale arrangements”.</p>
21	3.59	Ofcom to act as <i>arbitrator, or appoint an arbitrator</i> , should commercial agreement not be reached on matters dealt with in paragraph 3.59	<p>Operators will have 12 months from December 2010 to agree wholesale access rates for UMTS 900MHz and 800MHz. This time will also be used to carry out technical testing where possible. Technical testing may have to be carried out at a later time for the 800MHz spectrum;</p> <p>If by this time operators have not reached an agreement a 6 month process of final technical arbitration will begin to set prices on a retail minus basis. If a suitable arbitrator cannot be agreed, Ofcom will appoint an arbitrator;</p>

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			<p>During the period of negotiation 900MHz operators will be limited in their ability to launch UMTS services using 900MHz before wholesale access prices are agreed:</p> <ul style="list-style-type: none"> a) No sites before mid-2010; b) a maximum of 300 sites in total between mid-2010 and mid-2011, with a maximum of 75 sites in the area bounded by the M25; and c) a maximum of 800 sites in total by mid-2012, with a maximum of 200 sites in the area bounded by the M25. <p>UMTS 900 sites in areas which 800MHz services are commercially available shall be excluded from the calculation of the caps;</p> <p>After mid-2012, or at the point when the first lot of 800MHz is available, whichever is sooner, all restrictions on the launch of UMTS 900 will be lifted;</p> <p>If there is reciprocal wholesale access between parties then a price will be applied on a capped reciprocal data volumes basis.</p>
		The following come into effect if there is market consolidation	
22	3.65	<p>Total cap to be adjusted to 2 x 90MHz of FDD equivalent spectrum; sub1-GHz cap adjusted to 2 x 20MHz</p> <p>Number of lots of 800MHz and 2.6GHz spectrum that can be bid for to be changed to a maximum of 4</p>	

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		lots for 800MHz (2 x 5MHz) and a maximum of 3 lots (2 x 10MHz) for 2.6GHz; If TDD 2.6GHz spectrum is auctioned separately to FDD 2.6GHz spectrum, then it will be offered as a single 50MHz lot;	
23	3.66	Caps on the roll out of UMTS 900MHz spectrum should no longer apply in a converged market	
24	3.67	Additional coverage obligations will be placed on any operator that acquires 2 x 20MHz sub 1-GHz spectrum.	As detailed in paragraph 3.67

