

1 October 2012

Rt Hon Maria Miller MP  
Secretary of State for Culture, Media and Sport  
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A handwritten signature in black ink that reads "Dear Maria,".

I am writing to you today to summarise the progress that has been made over the last four weeks to bring forward the date when competitive 4G services can be offered in the UK using 800 MHz and 2.6 GHz spectrum, and to facilitate the roll-out of such services across the UK, for the benefit of consumers and the wider economy.

Before I do so however, I would like to acknowledge the efforts of the many organisations and colleagues that have contributed to this work, including your department and Andrew Pinder, the mobile network operators and the Mobile Operators Association, the TV broadcasters, Digital UK and Arqiva, the Department for Transport, CAA and MoD, the Department for Communities and Local Government, and the Department for Environment, Food and Rural Affairs, as well as many colleagues in Ofcom. Without the constructive engagement of these organisations and the efforts of the individual colleagues involved, we could not have achieved what we have in such a short period of time.

The situation today is as follows:

**800 MHz availability:**

- Following intensive technical and engineering planning work by the broadcasters, Digital UK and Arqiva over the last four weeks, the broadcasters and Digital UK are ready to instruct Arqiva, later this week, to bring forward the clearance date for the Oxford and Waltham transmitters and their associated relays from October 2013 to May 2013 – an advancement of five months;
- They are similarly ready to instruct Arqiva (on the same timescale) to bring forward the clearance date for the Angus and Rosneath transmitters and their associated relays from July and August 2013 respectively, to April 2013 – an advancement of over three months;
- I would like to emphasise that these material improvements in the speed of clearance have only become possible in the last few months as a result of the excellent progress that has been made to date with DTT switchover and clearance, and the experience gained as a result. It should also be noted that accelerating the timeline for DTT clearance in this way does increase certain risks, but we consider the level of such risks to still be acceptable.

- A grant application to cover the incremental costs of these changes to the C20 plan has already been reviewed and approved by the Ofcom Spectrum Clearance Finance Committee and HM Treasury;
- These changes mean that there will in practice be no transitional restrictions affecting use of the 800 MHz band to deliver 4G services in England, Wales and Northern Ireland after early June 2013, and the remaining restrictions affecting Scotland will in practice be limited to the Highlands and Islands, and in particular are unlikely to affect the delivery of 4G services in Edinburgh and Glasgow. (See Annex 1 for illustrative maps).

#### **MitCo:**

- Andrew Pinder (appointed by DCMS to lead the setup of MitCo) reports that very significant progress has been made over the last four weeks towards establishing MitCo and ensuring that it is ready to deliver advice and support to consumers, including the provision of filters, in time for the 800 MHz band to be used for 4G services shortly after the conclusion of the auction in the New Year. He reports that he and a number of prospective 800 MHz licensees are working well together, with general agreement on the way forward and a shared sense of urgency.
- Andrew reports that he expects Mitco to be in place as a legal entity before the auction, with transitional arrangements in place to move the shareholding to the eventual licensees. It will have started procurement of filters, and will have a reasonable understanding of likely early demand for these; it will have contracts and orders in place for the supply of these from day one, including fulfilment contracts to get them delivered to consumers; in case there is a problem meeting all the demand, there will be an agreement in place about how to handle rationing. Talks will have been held with the retail sector and filter suppliers to make sure there are second set filters available in the market, although in the early days there might be volume issues here too. A call centre should be in place to deal with calls coming in, with a link to DUK and others through a triage system. MitCo will have a comms strategy in place to get the message out to consumers, and a technical programme to tell the installer and technical trade what is going on.
- Areas of ongoing work include: the specification and procurement of filters; procurement of access to the output of the UKPM (currently produced by Arqiva and the BBC – Andrew reports that both Arqiva and the BBC are being cooperative here) and the development of an interference prediction model (building on the work already undertaken by Ofcom); the setup of a call centre operation; finalisation of the arrangements for corporate governance; setup of the organisation itself, including recruitment; setup of the Oversight Board; VAT; and identifying a better name for MitCo as this name is already used commercially by several companies and the web domain name is in use.
- We are and will continue to support this work through the secondment of staff to Andrew, the making available of David Hendon as interim chair of the Oversight Board, and the provision of technical advice and modelling as required.

#### **2.6 GHz availability:**

- We have identified a potential re-phasing of the civil and military radar modification plan that might allow 4G base stations using frequencies in the 2.6 GHz band to

operate in London from no later than the end of Q2 2013 – some three months earlier than the current plans would otherwise allow.

- We have shared this initial technical analysis with the MoD, DfT and CAA.
- Confirmation of the practical feasibility of this plan is, however, not going to be possible in the near future, not least until the MoD has completed the current procurement of a supplier for its radar modifications.
- In the meantime, we will continue to impress upon those responsible for this work the importance for consumers of its timely implementation, and of accelerating that implementation where possible. I will be seeing key government officials in the next few days to attempt to advance this. I would welcome your support in this area.

#### **Auction timeline:**

- We have looked carefully at the plan for the delivery of the auction. We have identified that, under certain circumstances, we would be able to start the bidding in the week beginning 7 January, a week or two earlier than would otherwise be the case. We think it unlikely to be possible, or indeed prudent, to aim to start the bidding earlier than this, given that there would then be a significant risk of the bidding having to be put on hold over the Christmas break.
- This earlier date for the commencement of bidding is dependent on certain external factors over which we do not have complete control, including the European Commission's decision regarding the transfer of the 1800 MHz divestment spectrum from EE to H3G, and the need to give sufficient time to prospective bidders after we have made the auction regulations before inviting applications and then starting the bidding. Nevertheless, to the extent that we can influence those factors to enable an earlier start to the bidding we are doing so.

#### **Planning:**

- Your department (DCMS) has taken the lead on the planning work stream, but for the sake of completeness I am including a report of this work here. I understand from DCMS officials that following a meeting with the Mobile Operators Association (MOA), operator representatives, officials from the Departments for Communities and Local Government (DCLG) and for Environment, Food and Rural Affairs (DEFRA), the MOA last week produced more detail on their original list of planning proposals. The MOA has detailed the changes being sought to both planning regulations and the electronic communications code and how the changes will help better roll-out and sharing, with more evidence of impact.
- DCMS and DCLG are developing jointly an approach to bring fixed operators and local authorities together to agree a code of best siting practice for street cabinets and new pole deployment, which they would own. A similar exercise will take place in parallel with mobile operators and local authorities to update their existing code. The current code was published by DCLG but is jointly owned by Government, operators and the Local Government Association.
- Following the broadband planning announcement on 7 September, a number of Ministerial discussions have also taken place around how best to expedite planning for infrastructure for mobile 4G services. These discussions are ongoing.

## Other developments:

- Ofcom has advised Telefonica and Vodafone that, on the basis of the information they have provided to us, we do not currently intend to open an investigation under the Competition Act 1998 into their planned network sharing arrangement. In addition the OFT has announced that it is clearing the joint venture between Telefonica and Vodafone relating to the ownership of the passive components of their base station sites.
- We understand from the parties that this arrangement will greatly facilitate their roll-out of 4G services across the UK in a timely manner, for example enabling them to achieve 98% indoor 4G coverage by the end of 2015.
- We note that EE has agreed to divest part of its 1800MHz spectrum to H3G. In accordance with the merger commitments given by its parent companies to the European Commission, that divestment is subject to approval by both Ofcom and the European Commission. Ofcom has indicated to EE and H3G that it will give its approval; the European Commission is currently considering the matter. We stand ready to implement the transfer as soon as that decision is forthcoming, assuming it is supportive.
- We have expedited the granting of a number of non-operational ('test and development') licences to mobile network operators over the last few weeks, to enable them to run tests and trials of 4G systems in various frequency bands and locations across the UK. We are also actively looking at a number of other requests from mobile network operators for changes that they believe would enable the provision of better mobile broadband services to consumers in the near future.

## Implications

We believe these developments have significantly enhanced the prospects for competitive 4G service provision across the UK from the middle of 2013. In particular we believe the previously assumed 15 to 18 month gap between the potential launch of 4G services by EE using 1800 MHz spectrum and the opportunity to launch a competing 4G service using 800 MHz or 2.6 GHz spectrum has now been reduced to as little as 6 to 8 months. Our analysis is as follows:

Whilst we cannot be certain how long the auction will run for, we anticipate that it will be complete, such that the winning bidders will know which frequencies they will be allocated, before the end of February or sometime in March at the latest, with licences issued very shortly thereafter.

We understand from Andrew Pinder that there is a very good chance that MitCo will be ready to start operation immediately after the issue of licences, if not before. Furthermore, MitCo will be free to distribute filters in many major cities of the UK as soon as it is ready to do so<sup>1</sup>. (In the case of Liverpool, Manchester, Leeds, Bradford, Wakefield and Sheffield, distribution of filters will have to wait until DTT clearance has been completed in April 2013; and in the case of Nottingham and Leicester until DTT clearance has been completed at the end of May 2013.)

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<sup>1</sup> For the purposes of this letter we consider the major cities of the UK to be London, Birmingham, Leeds, Glasgow, Sheffield, Bradford, Edinburgh, Liverpool, Manchester, Bristol, Wakefield, Cardiff, Coventry, Nottingham, Leicester, Sunderland, Belfast and Newcastle upon Tyne.

Switch on of 800 MHz base stations using frequencies in the top half of the 800 MHz band<sup>2</sup> (including by the 800 MHz licensee with the coverage obligation) will be possible in each major city as soon as MitCo has achieved the required level of consumer mitigation post DTT clearance in that city.

We further understand (from an MNO) that it might well be possible to offer a commercial service in an area as soon as four weeks after base stations are switched on, albeit there may be a need for further tuning of the network for some weeks thereafter.

On this basis, we believe the dates set out in Table 1 might well be possible for the deployment of commercial services using frequencies in the top half of the 800 MHz band, although the successful achievement of these dates is likely to depend materially upon the ability of MitCo to deliver information and filters to consumers in a timely fashion, as well as the licensees' ability to rapidly deploy and tune their networks.

**Table 1: Potential milestones for commercial service deployment using frequencies in the top half of the 800 MHz band:**

City	Send out filters from:	Switch on base stations from:	Commercial service from:
Belfast	Now	(April) <sup>3</sup>	May
Bristol	Now	(April) <sup>3</sup>	May
Newcastle upon Tyne	Now	(April) <sup>3</sup>	May
Sunderland	Now	(April) <sup>3</sup>	May
Edinburgh	Now	(April) <sup>3</sup>	May
Glasgow	Now	(April) <sup>3</sup>	May
London	Now	(April) <sup>3</sup>	May
Birmingham	Now	(April) <sup>3</sup>	May
Cardiff	Now	(April) <sup>3</sup>	May
Coventry	Now	(April) <sup>3</sup>	May
Liverpool	May	(June) <sup>4</sup>	July
Manchester	May	(June) <sup>4</sup>	July
Leeds	May	(June) <sup>4</sup>	July
Bradford	May	(June) <sup>4</sup>	July
Wakefield	May	(June) <sup>4</sup>	July
Sheffield	May	(June) <sup>4</sup>	July
Nottingham	June	(July) <sup>4</sup>	August
Leicester	June	(July) <sup>4</sup>	August

Switch on of 800 MHz base stations by those licensees with frequencies in the bottom half of the 800 MHz band<sup>5</sup> will have to wait until both sufficient consumer mitigation is in place and there is no longer any use of channel 61 and/or channel 62 for DTT broadcasting nearby<sup>6</sup>.

<sup>2</sup> 806 – 821 MHz paired with 847 – 862 MHz.

<sup>3</sup> Switch on of base stations in these cities can start as soon as licences are issued (subject to adequate consumer mitigation being in place).

<sup>4</sup> Switch on of base stations in these cities can start as soon as sufficient consumer mitigation is in place post DTT clearance in the area.

<sup>5</sup> 791 – 806 MHz paired with 832 – 847 MHz.

<sup>6</sup> For the purposes of this letter we have assumed that a minimum separation distance of 40km is required to comply with the transitional restrictions to protect continued use of channels 61 and 62 for DTT. We believe this to be a reasonable estimate of the separation distance likely to be required, but the exact distance required will in practice vary with a number of factors and it will be for each 800 MHz licensee to determine what separation distance is actually required in each case to meet the required transitional restrictions.

As in Table 1, in Table 2 we set out potential milestones for commercial service deployment, in this case for licensees using frequencies in the bottom half of the 800 MHz band. Again, the successful achievement of these dates is likely to be materially dependent on the ability of MitCo to deliver information and filters to consumers in a timely fashion, as well as the licensees' ability to rapidly deploy and tune their networks.

**Table 2: Potential milestones for commercial service deployment using frequencies in the bottom half of the 800 MHz band:**

City	Send out filters from:	Switch on base stations from:	Commercial service from:
Belfast	Now	(April) <sup>7</sup>	May
Bristol	Now	(April) <sup>7</sup>	May
Newcastle upon Tyne	Now	(April) <sup>7</sup>	May
Sunderland	Now	(April) <sup>7</sup>	May
Edinburgh	Now	May	June
Glasgow	Now	May	June
London	Now	June	July
Birmingham	Now	June	July
Cardiff	Now	June	July
Coventry	Now	June	July
Liverpool	May	(June) <sup>8</sup>	July
Manchester	May	(June) <sup>8</sup>	July
Leeds	May	(June) <sup>8</sup>	July
Bradford	May	(June) <sup>8</sup>	July
Wakefield	May	(June) <sup>8</sup>	July
Sheffield	May	June	July
Nottingham	June	(July) <sup>8</sup>	August
Leicester	June	(July) <sup>8</sup>	August

On this basis it would seem to us that, as a result of the work that has been undertaken over the past four weeks, there is now a realistic prospect of it being possible to offer 4G services to consumers in almost all major cities of the UK around the middle of next year – with it being possible to offer commercial services to consumers in some cities from as early as May 2013, and almost all major cities by no later than July 2013 (subject to MitCo's capacity to deliver information and filters to consumers, and the licensees' capacity to deploy and tune their networks). Any gap between the launch of commercial 4G services by EE using the 1800 MHz band and competitive 4G services using the 800 MHz band would therefore now appear to have the potential to be materially shorter, potentially as short as 6 to 8 months.

Deployment of 4G services using frequencies in the 2.6 GHz band may be possible in London from about July 2013, but this cannot be confirmed at this time. It remains the case that we fully expect it to be possible to use the 2.6 GHz band for 4G services across most of the UK from October 2013 onwards.

In conclusion therefore, I believe we have together made very real progress over the last four weeks. I believe there is now a very real prospect of competitive provision of 4G services using frequencies in the 800 MHz band from the middle of next year and that this

<sup>7</sup> Switch on of base stations in these cities can start as soon as licences are issued (subject to adequate consumer mitigation being in place).

<sup>8</sup> Switch on of base stations in these cities can start as soon as sufficient consumer mitigation is in place post DTT clearance in the area.

offers significant benefits to consumers and to the wider economy. There remains much to do, in particular to ensure that MitCo is ready to provide information and support to DTT viewers in time to enable the earliest possible deployment and switch on of 800 MHz base stations, but I believe the progress that has been achieved over the last four weeks, and the extent to which there is general agreement as to the best way forward, gives good grounds to be optimistic in this regard.

We will of course continue to support this and the other activities that are required to ensure that consumers can benefit from competitive 4G services as early as possible next year. I look forward to your continued support.

A handwritten signature in black ink, appearing to read 'Ed Richards', with a horizontal line underneath.

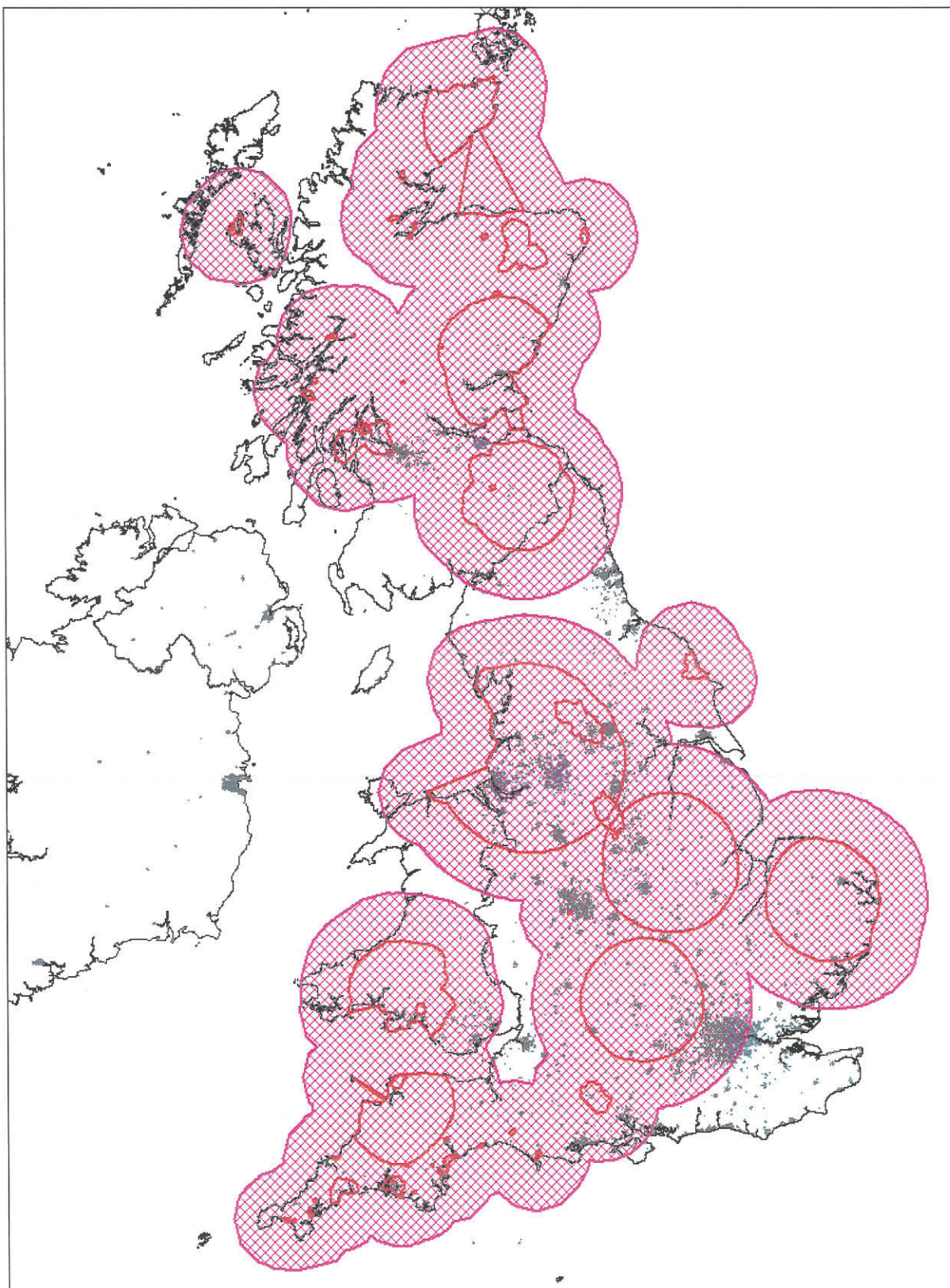
**Ed Richards**

cc: Ed Vaizey MP  
Olaf Swantee, Everything Everywhere  
David Dyson, Three  
Ronan Dunne, Telefonica O2 UK  
Guy Laurence, Vodafone UK  
Andrew Pinder

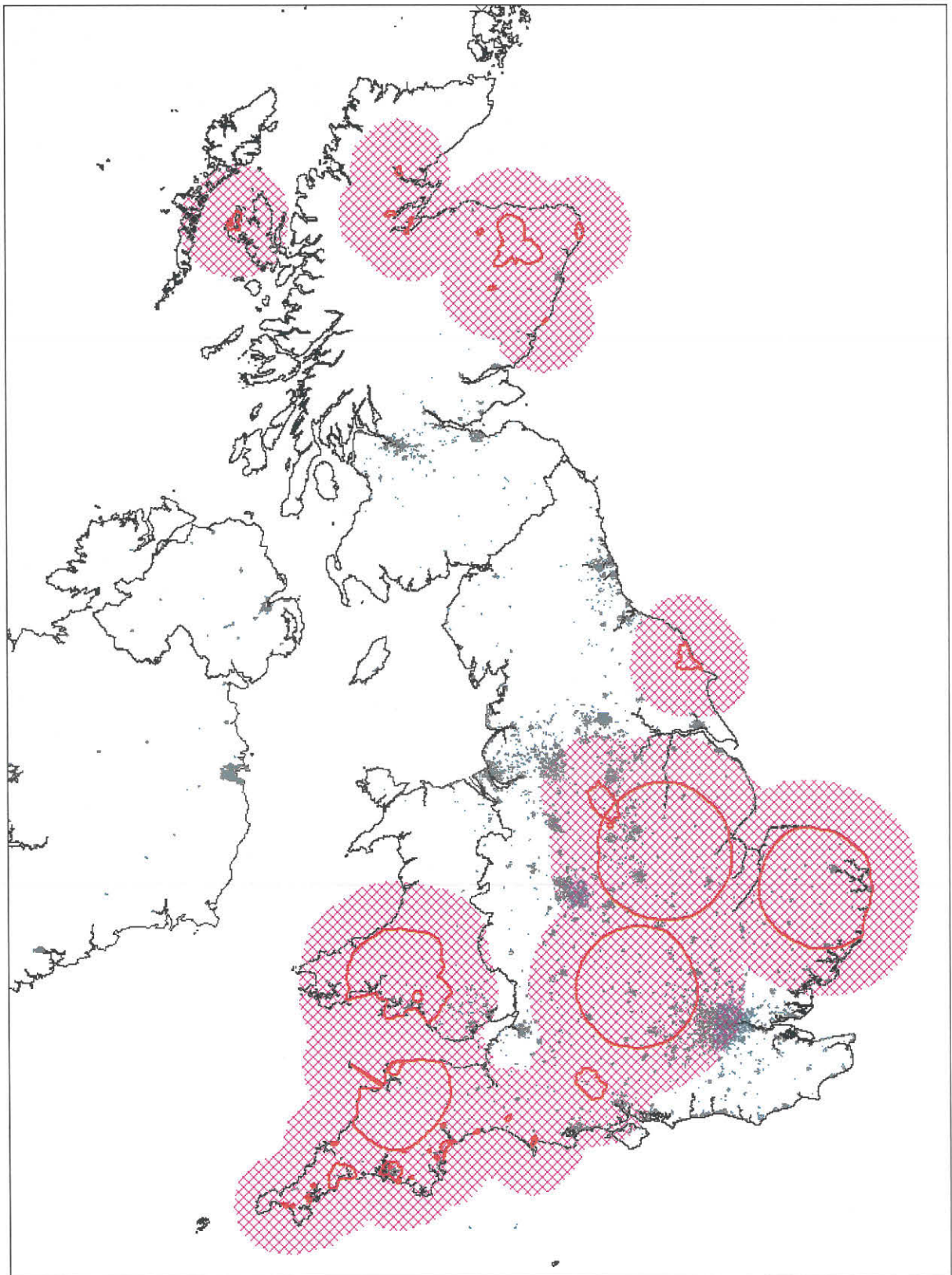
## Annex 1: Illustrative maps of accelerated DTT clearance

Switch on of 800 MHz base stations prohibited within red 'Protected Service Areas'; use of frequencies in the bottom half of the 800 MHz band likely to be restricted in purple shaded areas (to comply with transitional restrictions to protect DTT).

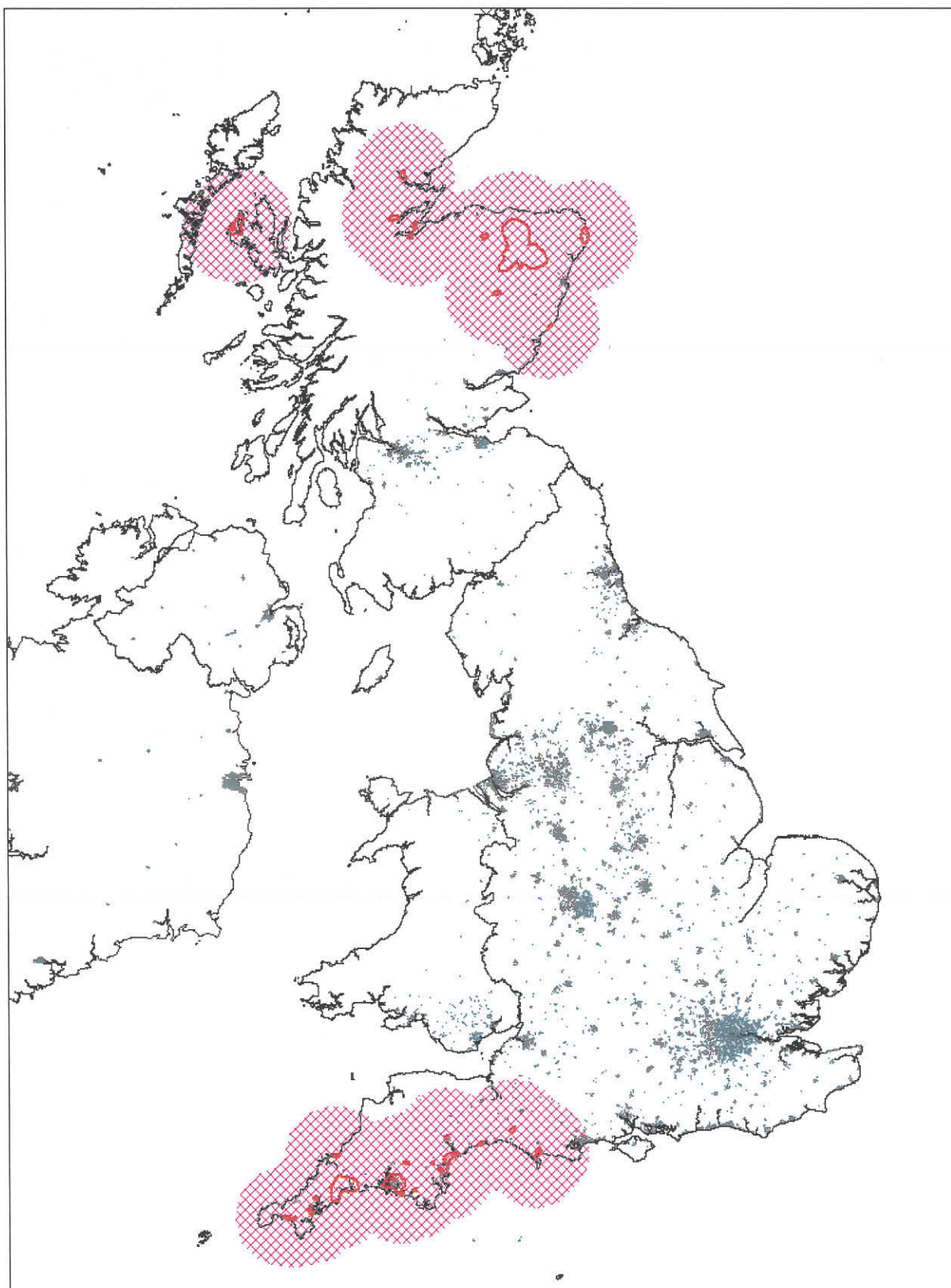
**End March 2013**



End April 2013



End May 2013



End June 2013

