Additional comments:

This response addresses the specific question of "sub-national RAN uses" - i.e. low power shared access to spectrum.

Ofcom does not provide any evidence to support its belief that sub-national RAN uses might promote competition. Ofcom's thinking seems to be based on the study commissioned from Real Wireless. However, this company and senior members of its team have a track record in promotion of femto cells (a form of low power shared access). This does not provide confidence to stakeholders that the study is impartial. Some freedom of information requests have been made to Ofcom on this matter - see:

http://www.whatdotheyknow.com/request/potential_conflicts_of_interest http://www.whatdotheyknow.com/request/low_powered_shared_access_to_spe

Question 4.1: What use, if any, would you make of the top 2x10 MHz of the 800 MHz band in the second half of 2012 if it were available for use? What would be the benefits for citizen and consumers of such availability?:

Question 4.2: If we were to offer shared access low-power licences in some way, do you have any comments on the appropriate technical licence conditions which would apply for the different options?:

Ofcom needs to treat the conclusions of the Real Wireless study with extreme caution, as explained in the additional comments to this response.

Question 5.1: Do you agree that national wholesalers need a reasonable overall portfolio of spectrum to be credible providers of higher quality data services? In particular, do you agree that national wholesalers need some sub-1 GHz in order credibly to be able to offer higher quality data services? Please state the reasons for your views.:

Question 5.2: Do you agree there is a material risk of a significant reduction in the competitive pressures, at least to provide higher quality data services, in retail and wholesale markets without measures in the auction to promote competition? Please state the reasons for your views.:

Question 5.3: Do you agree there is a risk of potentially beneficial sub-national RAN uses not developing without measures to promote competition? Please state the reasons for your views.:

No, there is little chance of sub-national RAN uses developing, even with measures to promote competition. This has not happened in the "DECT guard band", even though some users acquired access for to this spectrum for a pittance. It is even less likely to happen in the

2.6GHz band, because WiFi is a lower cost substitute for just about every conceivable potential application for a sub-national RAN.

Question 5.4: Do you agree with the analysis that at least four competitors are necessary to promote competition?:

Question 5.5: Do you agree that the specific measures we propose to take to ensure there are at least four holders of such spectrum portfolios are appropriate and proportionate?:

Question 5.6: Given the measures we propose to take to ensure four holders of spectrum portfolios sufficient credibly to provide higher speed data services, do you agree that it would not be appropriate or proportionate to introduce a regulated access condition into the mobile spectrum licences to be awarded in the combined award?:

Question 5.7: Do you consider that we should take measures to design the auction to assist low-power shared use of 2.6 GHz? If so, what specific measures do you consider we should take?:

No. Ofcom does not provide any evidence of the supposed potential benefits to competition from sub-national RANs. However, there will certainly be a substantial opportunity cost in not releasing this spectrum for exclusive high power mobile use.

Question 6.1: Do you have any comments on the proposal to include in one of the 800 MHz licences an obligation to serve by the end of 2017 an area in which 95% of the UK population lives, while providing a sustained downlink speed of 2Mbps with a 90% probability of indoor reception? Do you think there is another way of specifying a coverage obligation that would be preferable?:

Question 6.2: We would welcome views and evidence on the costs and benefits of imposing an additional coverage obligation focussed on particular geographical areas, and if such an obligation were to be imposed what might be the appropriate specification of geographic areas?:

Question 6.3: Do you have any comments or evidence on whether an additional obligation should be imposed to require coverage on specific roads?:

Question 6.4: Do you have any comments on our proposal not to use the combined award to address existing not-spots?:

Question 6.5: Do you have any comments on our proposal not to impose ?use it or sell it? obligations but to consider including an additional power to revoke during the initial term of the licences?:

- Question 7.1: Do you have any comments on the proposals relating to the duration of the initial licence period, our rights to revoke the licence during this period, the charging of licence fees after the end of the initial period and our additional revocation powers following the initial period?:
- Question 7.2: Do you have any comments on the proposal to amend the spectrum Trading Regulations to apply to the auctioned licences in the 800 MHz and 2.6 GHz bands, to include a competition check before we consent to a spectrum trade of mobile spectrum and not to allow transfers that would increase the number of 2.6 GHz low-power licensees?:
- Question 7.3: We welcome views on the merits of the proposed approach to information provision, in particular concerning the type of information that may be helpful and any impacts that publication of information might have both on licence holders and the wider spectrum market.:
- Question 8.1: Do you agree with the way in which we are taking account of the main factors relevant to spectrum packaging and why?:
- Question 8.2: Are there other factors that we should consider to develop our approach to packaging? If so which ones and why?:
- Question 8.3: Do you agree with our packaging proposals for the 800 MHz band? Please give reasons for your answer.:
- Question 8.4: Do you agree with our proposal not to allow relinquishment of 900 MHz spectrum and why? Do you have any other comments regarding our packaging proposals for the 900 MHz band?:
- Question 8.5: Do you agree with our proposal not to allow relinquishment of 1800 MHz spectrum and why? Do you have any other comments regarding our packaging proposals for the 1800 MHz band?:
- Question 8.6: Do you agree with our proposal not to make provisions to include 2.1 GHz spectrum in this auction and why?:
- Question 8.7: Which aspects of our packaging proposals for the 2.6 GHz band do you agree with and why?:
- Question 8.8: Do you agree with our proposed approach for eligibility points and why?:
- Question 8.9: Which approach to reserve prices do you think would be most appropriate to secure optimal spectrum use in the interests of citizens and consumers, and why?:

Question 9.1: Do you agree with our proposals for the auction design and why?:

Question 9.2: Do you have any comments on the proposed auction rules as explained in section 9, Annex 9 and Annex 10?:

Question 9.3: Do you have any comments on how we should approach the payment of deposits and licence fees?:

Question 10.1: Do you have any comments on our proposal to use 800 MHz price information as derived from the auction to estimate the full market value of 900 MHz spectrum?:

Question 10.2: Do you have any comments on our proposal to use an average of 800 MHz and 2.6 GHz price information as derived from the auction to estimate the full market value of 1800 MHz spectrum?:

Question 10.3: Do you have any comments on the proposed approach to convert lump sum amounts into annual payment?: