

Additional comments:

The railway, in common with other critical national infrastructure, relies on high-quality, highly reliable telecommunications. The quantity and quality of information needed to run the network safely and efficiently is set to continue to grow as signalling, passenger information and train management become increasingly sophisticated to deliver the railway Britain's economy needs.

Currently, GB mainland railway operational communications, to train drivers and key staff, is delivered using legacy analogue radio systems, which are gradually being replaced by GSM-R. All of these systems are built upon a common foundation of good quality, dedicated radio spectrum. This is however just one system element required to deliver a mobile communication system fit for purpose. The next generation of operational mobile communications, such as Automatic Train Operation and In-Cab CCTV, will require even more intensive data flows.

Auctioning spectrum to commercial users makes sense if we want to maximise government's revenues. However, requiring providers of critical national infrastructure to compete with mobile telephone operators risks either under-providing essential spectrum, or over-paying for it.

Maximising income from the auction must be set against the cost to essential public services of doing so. Network Rail's income is made up of direct grant from government and income from train operators, many of whom are in receipt of public subsidy. Most other critical national infrastructure is publically funded; forcing competition between essential public services and commercial operators is unlikely to deliver value for money.

One way to proceed would be to reserve sufficient spectrum for critical national infrastructure. This approach has been followed in the United States and ensures that revenue from commercial operations is maximised and the public interest protected.

If this approach is not followed, in favour of a conventional price-led auction, it is likely that critical national infrastructures may have to buy mobile data services from commercial operators. This would be problematic, because the specifications of the two types of use are quite different. The railway requires extremely reliable and high-quality communications, well beyond what is required for mobile telephone networks. If a mobile telephone signal is weak it is an irritation; if a train with in-cab signalling loses contact with the control centre it would cause significant delays to multiple trains; in the worst-case scenario it could become a safety risk.

In summary, we believe that auctioning spectrum is appropriate for commercial users but not critical national infrastructure or emergency services users. The different specifications required, as well as value for money for taxpayers, mean that to require Network Rail and others in a similar position to compete with mobile telephone services risks under-specifying or over-paying, or both. Reserving a proportion of the spectrum for critical national infrastructure would enable the government to maximise revenue from commercial operators

without denying essential public services' rather different telecommunications needs. This approach could either be achieved through direct access to suitable spectrum, or by applying public service commitments to some of the auctioned spectrum.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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.:

Network Rail do not wish to make a specific response to this question at this point in time.

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.:

Network Rail do not wish to make a specific response to this question at this point in time.

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.:

Network Rail do not wish to make a specific response to this question at this point in time.

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

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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

Network Rail do not wish to make a specific response to this question at this point in time.

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

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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.:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

Question 8.2: Are there other factors that we should consider to develop our approach to packaging? If so which ones and why?:

Network Rail do not wish to make a specific response to this question at this point in time.

Question 8.3: Do you agree with our packaging proposals for the 800 MHz band? Please give reasons for your answer.:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

Question 8.6: Do you agree with our proposal not to make provisions to include 2.1 GHz spectrum in this auction and why?:

Network Rail do not wish to make a specific response to this question at this point in time.

Question 8.7: Which aspects of our packaging proposals for the 2.6 GHz band do you agree with and why?:

Network Rail do not wish to make a specific response to this question at this point in time.

Question 8.8: Do you agree with our proposed approach for eligibility points and why?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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

Network Rail do not wish to make a specific response to this question at this point in time.

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

Network Rail do not wish to make a specific response to this question at this point in time.

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

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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?:

Network Rail do not wish to make a specific response to this question at this point in time.

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

Network Rail do not wish to make a specific response to this question at this point in time.