Question 1: Do you agree that the technical conditions should be in the form of SURs, with our approach to defining these and to our specific proposals for the 406.1-430 MHz band?:

No. Airwave does not agree that this is an appropriate way of defining the technical conditions for this spectrum, especially with spectrum which is used by and adjacent to that used by the emergency and public safety services. Our reasons are given in detail in the additional comments section below.

Question 2: do you agree that Ofcom should make trading regulations in the form proposed and that the minimum trading unit should be 50 kms square and 6.25 kHz bandwidth?:

Airwave does not agree with the technical basis behind the regulations but has no problem with the minimum trading unit.

Question 3: do you agree with our proposal to publish information in the Transfer Notification Register and WT Register?:

No. Airwave would not like to see the technical details of emergency and public safety services spectrum made publically available.

Question 4: do you agree that we should make WT Register regulations in the form proposed?:

No.

Question 5: do you agree with our proposal to create a new licence product and with the proposed Interface Requirement?:

No.

Additional comments:

General Concerns:
Airwave Solutions Ltd has been contracted by the UK Government to manage and run the communications service for the emergency and public safety services in Great Britain. This includes the police forces, ambulance trusts, fire and rescue services and many of their partners (over 200,000 individual users from over 400 organisations). Airwave?s coverage extends to close to 99% of Great Britain enabling the blue-light services and their supporting partners to ensure public safety.

Airwave is therefore very concerned when proposals are made which may threaten the efficacy of that communications network, and which may put the safety of network?s users and ultimately, the general public, at risk. This is not a matter to be taken lightly and certainly not something to be rushed into without full consideration and with full explanation as to how the emergency and public safety network will be safeguarded. Airwave therefore welcomes this consultation and would be happy to meet Ofcom

and explain any of the matters described in this letter.

I list more specific technical points below:

1. It is Airwave?s contention that a reasonable spectrum and block mask is important for all equipment that is allowed to use the radio spectrum. It is very difficult to envisage the pattern and type of usage when a technology is initially put into the field. Allowing a relaxed or non-existent mask to encourage new technology may result in a premature limit to the number of the users due to the build up of interference. Once a technology with a relaxed spectrum mask has been allowed into the field it is usually impossible to tighten the specifications.

2. Following from the above, Airwave is concerned that equipment may be deployed, particularly in block A but also possibly in block B, with no or lax spectrum mask requirements. Airwave?s fear is that the usage of this equipment could build up over time and cause interference to Block B. By the time the interference was recognised there would be so much equipment in use that retrospective action to bring in tighter spectrum masks would not be possible.

3. The concept of SURs based on pfds is based on inherently difficult concepts. Airwave is concerned that operators proposing to deploy new technologies in block A may not have the time or inclination to do a thorough study, which will undoubtedly be costly, and may embark on bidding for spectrum and deploying new equipment with relaxed spectrum masks without appreciating the potential interference that may be caused.

Parameters used to calculate technical limits - Table A6.1:
In clause A6.9 it states that the users of blocks B and C are assumed to be TETRA. Table A6.1 then goes on to use figures from Analogue specifications which are not relevant to the TETRA equipment actually used, unrepresentative of typical analogue equipment and actually seem to be wrong ? see below. These parameters must be based on the real performance of Airwave TETRA equipment in the field. Airwave?s calculations suggest that the pfd limits proposed are woefully inadequate for a TETRA system (>10 dB). To accept the concept of SURs using pfds Airwave would have to be certain that the parameters used in the calculations were representative.

Other points
In Section 4.10 Statutory framework:
It states here that a primary aim of spectrum management policy is the control the level of interference. Airwave maintains that much of the necessary control needs to be put in place in the form of spectrum and block masks, before equipment is deployment. When a lot of equipment has already been put in the field it is virtually impossible to go back and improve equipment specifications thus the victim of the interference would have no redress.

In A 6.10 ?Hole Punching?:
Airwave fails to see how improving the selectivity of a receiver can solve a problem that is caused by out of band interference from a transmitter with a poor spectrum mask which is producing interference on the receiver?s input frequency. This problem can only be solved at the transmitter. Airwave also cannot see how the co-location of

transmitters can solve this problem.

Also on this point, in the real world, most issues will be of the ?hole punching? variety, as one source is likely to be dominant. Thus not limiting the area that these may potentially cause interference over by use of a mask could be seen as irresponsible.

Although the use of pfd limits can give an idea of the average levels of interference, they say very little about the probability of high level interference. In the case of ?hole punching? by base stations at least the situation is static and there is a possibility that interference can be tracked to source. The worst case for a radio network like Airwave, where very levels of reliability are required, would be the case of interference from mobiles to base stations as might occur at some block boundaries. In this situation, with relaxed spectrum masks on equipment and no block mask, mobiles passing close to a base station or parked nearby may cause severe interference. This situation would be unpredictable and is unacceptable in the emergency and public safety services network. With control by mask, the distance at which this issue becomes significant can, at least, be minimised.

6.30 Interference resolution and enforcement:
If the SURs using pfds are brought in, Airwave fears that more and more cases of interference will end up as in clause 6.30.3. As expressed earlier, once equipment has been deployed in any numbers, it is virtually impossible to change masks. In reality therefore the avenues open to the victim in such cases are very restricted and the time to resolution may be from long to never. This is clearly not acceptable for the emergency and public safety services network.

In Table A6.1 Note K:
Airwave would like further information made available to substantiate this claim.

Airwave Solutions takes its partnership with the Government in providing the emergency and public safety services very seriously and hopes that its position is clearly stated in this response letter. Airwave Solutions would be happy to meet and explain any of the above concerns to Ofcom at any time.