Additional comments:

We welcome the opportunity to comment on the consultation document on VHF spectrum release in the range 143MHz to 156MHz. Our interest in the spectrum is not to solicit the use for our own purposes but to comment on areas of potential interest in its reallocation.

Question 1:What future uses might this spectrum support:

There are several potential uses however we propose two areas where there exists a need which would be alleviated by the availability of high quality spectrum.

1. Wireless metering and the smart home - this being a narrowband use of the spectrum

2. LTE for emergency services - this being a wider band use of the spectrum

Question 2:What implications might these possible future uses have for the way in which this spectrum is configured in terms of transmit powers, bandwidth and geographic coverage? For example:

- **Could these possible future uses be accommodated under the existing Business Radio licence products? If so, would they need the channel widths of the existing Business Radio licence products to be increased above 25 kHz ?**
- **Alternatively, would they require an entirely new licence product to be developed?**
- **Do you think that we should allocate (at least) some of this spectrum for licence exempt use?**
- **If (at least a part of) this spectrum is made available for use under the existing Business Radio licence products, do you think that more spectrum should be allocated for light licence products as against technically assigned or area defined products?**

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Take the example of wireless metering. This requires relatively low data rates but to keep infrastructure costs low large geographical coverage from a base station or data aggregator is required.

A comparison is made between operating at 868MHz and 150MHz for a base station on Emley moor. Taking a terrain cut through the landscape up to 20km in a Westerly direction the SNR was calculated taking into account the terrain effects. For a 1kHz effective noise bandwidth and assuming a house penetration loss of 15 dB at 150MHz and 20dB at 868MHz the percentage of area covered along the line of interest was 84% at 150MHz and 32% at 868MHz [to achieve an SNR of 10dB and using a low transmit power of 20dBm].

For LTE similar percentage increases in coverage will be possible however transmit power of the order 1W are required.

Question 3:What factors should Ofcom take into account in deciding how to make this spectrum available (both in terms of the choice of release mechanism and in terms of the timing and speed of release)?:

Question 4:What total bandwidth in megahertz (MHz) would you require to operate the prospective service (whether the authorisation is provided under licence or is licence exempt)? (eg. if answering 25KHz, please make clear if this is 1 x 25 kHz or 2 x 12.5 kHz):

The two examples, requiring very different bandwidths, suggest that to make best use of the band flexibility in the allocation of bandwidth would be an advantage.

Question 5:Would this bandwidth need to be contiguous?
If so, please explain why your service requires contiguous blocks only.
If not, what would be the size of individual channels within the overall bandwidth?:

For case 1 [smart home] contiguous bandwidth would not be required whereas for case 2 [LTE] contiguous bandwidth would be required at least for the minimum LTE block of 1.4MHz. Again this stresses the need for flexibility.

Question 6:If you think the prospective use would be suitable for licence exemption, please indicate the transmit power levels you are likely to require:

Question 7:In which geographic area are you likely to use the spectrum (eg. UK Wide, Regional, Conurbations, Rural):

UK wide.

Question 8:Please give a brief description of the technology (ies) that you will be using with the spectrum that you license:

Question 9:Would you require a minimum licence tenure for you to consider operating your service? If so, how long (in years) would you want this minimum licence tenure to period to be (noting that you might need to pay for the full minimum tenure period on licence issuance)?:

Question 10:As explained in section 2, the existing Business Radio licence products are currently made available in bandwidths of 6.25, 12.5 or 25kHz, although it would be possible to make them available in larger bandwidths where there is enough spectrum to enable this (as is the case with this newly available Mid Band VHF spectrum). In light of this, would your prospective use of this newly available Mid Band VHF spectrum:

Be possible using one of the existing Business Radio licence products in the currently available bandwidths (of 6.25, 12.5 or 25kHz)? Be possible using one

of the existing Business Radio licence products, but in a bandwidth greater than 25 kHz (but with other licence conditions remaining as now)?

Require a new type of licence

Require licence exemption

Don?t know:

Question 11:If your prospective use of this newly available Mid Band VHF spectrum would be possible using one of the existing Business Radio licence products, which existing licence product would it require?

Simple Site
Simple UK
Suppliers Light
Technically Assigned
Area Defined

If your proposed use is Technically Assigned please indicate if the use will be shared or exclusive:

Question 12:Which existing Business Radio licence type do you currently hold? (Please type in product name) Simple Site, Simple UK, Suppliers Light, Technically Assigned, Area Defined, Combination of the above, None, Don?t know :

Question 13:Would additional spectrum allow you to consolidate existing assignments? (If so, please provide information on the assignments that you may hand back to Ofcom as a result of consolidation):

Question 14:Do you have any further comments: