

## Consultation response form

### Your response

Note: question numbers are aligned to relevant sections in the call for inputs document. As such, there is no question 1.

<p><b>Question 2.1: What are your planned timelines for commercial availability of network equipment and devices for the 26 GHz band? When will equipment for testing and trials be available? Please specify the specific mmWave tuning ranges supported and their timing.</b></p>	<p>Confidential? – Y/N</p>
<p><b>Question 2.2: Given the 3GPP studies into NR-based operations in licence-exempt spectrum, when (if ever) do you expect to support licence exempt operation and/or coordinated sharing in the 26 GHz band in your products?</b></p>	<p>Confidential? – N Given the fact that all the compatibility studies done in PT-1 and TG 5/1 are based on the assumption that the deployment of 5G systems in the 26 GHz range will be controlled by means of individual authorization licences, why is OfCom asking the 5G operators if they would like to have a licence exempt regime? Since a decision of this kind would invalidate all the studies done so far in preparation of WRC-19 AI 1.13, why not taking a clear position on this point and avoid this Damocle's sword? ESA suggests to OfCom to take a position in line with the position expressed by Digital Europe at the last PT-1 meeting in September 2017, i.e. no licence-exempt spectrum at 26 GHz.</p>
<p><b>Question 2.3: When do you expect to support standalone New Radio in the 26 GHz band in your products?</b></p>	<p>Confidential? – Y/N</p>
<p><b>Question 3.1: Are there any other aspects related to the existing use of 26 GHz not covered in this CFI that you believe need to be considered?</b></p>	<p>Confidential? – N ESA could not find references to the need of protecting the 23.6-24 GHz EESS(passive) systems from unwanted emissions by IMT 2020 in the 26 GHz range.</p>
<p><b>Question 3.2: What options for the existing services in the 26 GHz band do you believe need to be considered to allow for the introduction of new 5G services? Please give as detailed a response as possible along with all relevant information and explain how you would see any potential option you provide working in practice.</b></p>	<p>Confidential? –N ESA assumes OfCom will only support CPM methods that will ensure the respect of the note contained in Resolution (WRC-15): "When conducting studies in the band 24.5-27.5 GHz the need to ensure the protection of existing earth stations and the deployment of future receiving earth stations under the EESS (space-to-Earth) and SRS (space-to-Earth) allocation in the frequency band 25.5-27 GHz will be taken under account."</p>

	This should therefore be a pre-condition for any valid CPM method to solve this Agenda Item.
<b>Question 3.3: Should a moratorium be placed on issuing new licences in the 26 GHz band for existing services? E.g. to ensure that the 26 GHz band is not unnecessarily encumbered prior to the development of a new authorisation / licensing approach for 5G services?</b>	Confidential? –N This question is in contradiction with Resolution 238 (WRC-15) referred above. Blocking future licences (not only future sites!) is not responding at all to this Resolution. Elsewhere in the document the OfCom text goes even one step further by saying "...including the option of progressively clearing the band, in time, geography and with regards to bandwidth required to facilitate 5G.". In other words OfCom would be ready not only to block future licences but even terminating the existing ones. ESA considers this not in line with the Resolution 238 (WRC-15) text.
<b>Question 4.1: What service would be delivered and to which consumer and/or organisations?</b>	Confidential? – Y/N
<b>Question 4.2: Where in the UK would the 26 GHz spectrum be used to deliver services? For example, will deployments be focussed on:</b> a) Areas of existing high mobile broadband demand? b) Rural areas? c) Rail and road corridors? d) Specific types of enterprise or industrial sites? e) Indoors or outdoors? f) Specific nations or regions of the UK?	Confidential? –N This questions hints to the possibility of an IMT 2020 presence not limited to urban and suburban areas but basically unlimited (urban, suburban <b>and rural</b> ). ESA reiterates the fact that without a clear acceptance of the urban and suburban areas limitation all the compatibility studies done so far in CEPT PT-1 and TG 5/1 will have to be re-done under this new deployment scenario, very different from the deployment scenario provided by WP 5D to TG 5/1.
<b>Question 4.3: Where 5G cells are deployed, are they expected to be individual cells or as clusters of cells required to give wider areas of contiguous coverage? What would be the area of a typical contiguous coverage cell cluster?</b>	Confidential? – Y/N
<b>Question 4.4: What capacity and bandwidth (i.e. Channel Bandwidth in MHz) would be required at each cell to meet initial capacity requirements? How will this change over time?</b>	Confidential? – Y/N
<b>Question 4.5: What quality of service is required? How sensitive is the service being offered to variations in radio interference from other operator's 5G cells and other spectrum users?</b>	Confidential? – Y/N
<b>Question 4.6: Will end users be fixed or mobile?</b>	Confidential? – Y/N
<b>Question 4.7: What are the characteristics of 5G at 26 GHz which make this band particularly suited to the service you plan to deploy? What other spectrum bands could be</b>	Confidential? – Y/N

used as an alternative, or in preference to, the 26 GHz band? To what extent could carrier aggregation and other techniques reduce your reliance on 26 GHz?	
Question 5.1: Should Ofcom consider licencing options other than the 3 examples set out above (licence exempt, shared coordinated and area defined) for the 26 GHz band? If so, what other options do you consider should be included?	Confidential? –N See answer to Question 2.2 above.
Question 5.2: What methodologies could be used to pre-define 'high demand areas' for area defined licences?	Confidential? – Y/N
Question 5.3: What mechanism could be used to coordinate cell deployments by different operators in shared spectrum?	Confidential? – Y/N
Question 5.4: What methodologies could be used for determining the proportion of spectrum to allocate using area defined licences and coordinated deployment?	Confidential? – Y/N
Question 5.5: Do you agree that the 26 GHz band should be released progressively? What risks do you envisage with such an approach and how can these be best mitigated?	Confidential? – Y/N