Your response

Question	Your response
Question 1: What interest do you have in deploying outdoor or standard power Wi-Fi or other licence exempt RLANs in the Lower 6 GHz band? Please provide details of the types of expected deployments.	
Question 2: Are you interested in providing or developing AFC databases for use in the Lower 6 GHz band in the UK?	
Question 3: Do you have any views on the operational considerations of setting up and running AFC databases?	
Question 4: Do you have any views on how we should manage the approval process for AFC databases and, in particular, whether we should rely on parts of the FCC process rather than requiring the whole process to be re-run in the UK?	
Question 5: Please provide any other comments on our proposals for extending access to standard power Wi-Fi and outdoor use, including the overall approach, any details on technical parameters and the running of the AFC databases in this band.	The Met Office make extensive use of satellite-based sea surface temperature (SST) measurements made in the 6575-7275 MHz frequency band. This usage is noted in the Radio Regulations through footnote RR No 5.458 which indicates that administrations should bear in mind the needs of the Earth exploration-satellite (passive) and space research (passive) services in their future planning of the bands 6 425-7 075 MHz and 7 075-7 250 MHz as passive microwave sensor measurements are carried out in these frequency bands to measure sea-surface temperature (SST). Measurements of SST made by the Advanced Microwave Scanning Radiometer (AMSR-2) instrument in this frequency band have been used in the Met Office operational weather forecast model since 2016. The Met Office are also using historical AMSR-2 data within a new SST climate data record for the ESA Climate Change Initiative. The AMSR-2 instrument provides global coverage and is used alongside in-situ data from drifting buoys, and satellite measurements made by infrared and microwave radiometers operating at higher frequencies that have much reduced SST sensitivity compared to that at 6 GHz.

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	The AMSR-2 data provides more observations than other systems at very high latitudes, which is very important, as other observations are sparse in these regions. Measurements from this instrument are more spatially homogeneous than is seen for infrared instruments as observations are available in the presence of cloud, the instrument is also not sensitive to aerosols (such as Saharan dust), which further improves the homogeneity of its coverage. Looking to the future, the European Space Agency's Copernicus Imaging Microwave Radiometer instrument (CIMR), which is due to launch in the late 2020's, will also make use of the 6 GHz frequency bands for measurements of sea-surface temperature, land- and ice-surface temperature, and supports sea-ice parameters. The continued availability of data from this frequency band is of great importance to the Met Office for both weather forecasting and climate monitoring.
Question 6: Do you have any comments on our proposal to use a "phased" approach, or on the alternative to wait for European harmonisation?	Following decisions made at WRC-23, the Met Office are working with Ofcom on the UK's input to WRC-27 Agenda Item 1.19 which is considering identifying two new frequency bands for EESS (passive) measurements. These frequency bands would complement the existing band and help to identify and mitigate the impact of interference from IMT or other active systems in the 6 GHz band. Any new satellite instruments monitoring the new band allocations will probably not be available until 2-5 years after a ratifying decision has been made at WRC-27. These additional timescales should be taken into account when deciding on timing of the increased usage of the spectrum with the new Wi-Fi or mobile systems. A period of 2-5 year where the SST measurements are degraded due to increased RFI, which might occur if all limitations on use in the upper 6 GHz were to be dropped after WRC-27, would make monitoring trends in that period more difficult. Thus, the Met Office is of the view that it would be prudent to wait until there is certainty regarding the future of SST measurements before introducing new active users into this crucial frequency band. Otherwise there is a risk that measurements could be compromised, which would have an impact on both weather forecasting and climate monitoring.
Question 7: Do you have any comments on the above suggestion to manage any "legacy" Wi-Fi devices, or alternative suggestions?	

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Question 8: Do you have a view on the amount of spectrum that should be prioritised for Wi-Fi under the prioritised spectrum split option? Please provide evidence for your view.	
Question 9: Do you have any comments on our plan for a "phase 1" when Wi-Fi will be introduced?	
Question 10: One variation on "phase 1" would be to only authorise Wi-Fi in client devices to "seed" the market. Would you have any views on this, or suggestions for other variations?	
Question 11: Do you have any comments on our plan for a "phase 2" when mobile will be introduced?	As noted in our response to Question 6, we think it is important to take into account the availability of suitable frequency bands for continued SST measurements before enabling widespread use of this frequency band. Otherwise there is a risk that these crucial measurements will suffer from interference and degrade the quality of essential weather and climate information.
Question 12: Do you have a view on the amount of spectrum that should be prioritised for mobile under the prioritised spectrum split option? Please provide evidence for your view.	
Question 13: Do you have any evidence or views about the geographical extent of mobile networks' likely deployment in Upper 6 GHz?	
Question 14: Do you have any comments on our proposed phased approach to authorisation of both Wi-Fi and mobile in the Upper 6 GHz band?	As noted in our response to Question 6, we think it is important to take into account the availability of suitable frequency bands for continued SST measurements before enabling widespread use of this frequency band. Otherwise there is a risk that these crucial measurements will suffer from interference and degrade the quality of es-essential weather and climate information.
Question 15: Do you have any comments on our proposal to not include very low power portable devices in the Upper 6	The Met Office welcomes the proposal to limit usage to indoor devices – as the this will reduce the risk of interference to sensitive SST measurements.

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GHz band at this stage, but to keep this under review?	We hope that future decisions regarding the use of this band continue to take into account the need to limit interference into these important measurements (as noted in footnote RR No 5.458).
Question 16: Do you have any comments on our proposal to authorise the use of low-power indoor Wi-Fi access points and client devices to use 6425–7125 MHz?	As noted in response to Question 15, we welcome the proposal to limit usage to indoor devices – as this will reduce the risk of interference to sensitive SST measurements. We hope that future decisions regarding the use of this band continue to take into account the need to limit interference into these important measurements (as noted in footnote RR No 5.458)
Question 17: Do you have any comments on the proposed technical conditions?	
Question 18: Do you have any comments on the proposed VNS draft?	
Question 19: Do you have any suggestions for an appropriate mechanism for enhanced sensing, or comments on the proposed solution above?	
Question 20: Do you agree with our proposal to restrict Wi-Fi from transmitting in the 6650-6675.2 MHz band to protect the radio astronomy service? Please provide any technical evidence to support your view.	
Question 21: Do you agree with our assessment of Wi-Fi coexistence with existing users of the band? If not, please provide details.	The Met Office note that Section 6.24 of the consultation document states that "*In the medium term, we consider the risk of interference to EESS from indoor Wi-Fi is low*". We concur with this statement and would appreciate the opportunity to review the supporting evidence. The Met Office also welcomes the statement in Section 6.24 that Ofcom "*will be seeking a positive outcome on the allocation of new frequency bands to safeguard SST measurements on a long-term basis*" and will continue working with Ofcom to support the relevant international negotiations. As noted in our response to Question 6, any new frequency bands under consideration will be complementary to help mitigate

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	interference in the existing 6 GHz band and that the Radio Regulations still require the EESS usage to be considered by national regulators as outlined in footnote RR No 5.458.
Question 22: Do you have any evidence about the costs to operators of moving fixed links in and around "high density" areas (such as urban centres) to other bands?	
Question 23: Do you have any comments on our initial assessment of our likely approach to coexistence between future mobile use and current users in the Upper 6 GHz band?	Section 7.20 discusses the possible impact of potential new frequency bands for SST measurement, stating that "*the allocation of either or both of these bands should alleviate any concerns around the continuation of SST measurements from the time that mobile rollout is expected*". The Met Office would like to highlight that, as noted in our response to Question 6, any new frequency bands under consideration will be complementary to help mitigate interference in the existing 6 GHz band and that the Radio Regulations still require the EESS usage to be considered by national regulators as outlined in footnote RR No 5.458. We are also interested to understand Ofcom's plan for the Upper 6 GHz frequency band if additional frequency bands are not allocated under WRC-27 Agenda Item 1.19.
Question 24: Do you have any other comments on our policy proposals or any of the issues raised in this document?	As noted in our response to Question 5, microwave sea surface temperature (SST) measurements are of great importance to the Met Office for both weather forecasting and climate monitoring. While there is some scope to identify additional frequency bands to mitigate interference – the choice of frequency band used for these measurements is driven by physical properties of the Earth system and cannot be switched to accommodate other users. If the ability to make these sensitive measurements is degraded or lost this would have a significant negative impact on our ability to predict severe weather over the UK. These predictions are a vital part of the Met Office value chain, through which the organisation is expected to deliver benefits worth £56 billion to the UK economy over the next 10 years (2024-2033)[1].

[1] https://www.metoffice.gov.uk/about-us/news-and-media/media-centre/corporate-news/2024/met-office-delivers-gbp56-billion-of-economic-value-to-the-uk