# Your response

| Question | Your response |
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| **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. | As researcher Lab in wireless communication and spectrum management, we are highly interested in the deployment of standard power Wi-Fi and licence exempt RLANs in the Lower 6 GHz band. This deployment is essential for future innovation in improving broadband connectivity, supporting next-generation wireless networks, and enabling new use cases in smart cities, IoT, and industrial applications. |
| **Question 2**: Are you interested in providing or developing AFC databases for use in the Lower 6 GHz band in the UK? | Yes, we have a track record of research and innovation in development of data base technologies, for example in the context of TVWS, and are interested to support the development and deployment of Automated Frequency Coordination (AFC) databases to ensure efficient spectrum sharing and coexistence between Wi-Fi and incumbent services. In particular, we would look into deploying new advance in AI and ML for this purpose. |
| **Question 3**: Do you have any views on the operational considerations of setting up and running AFC databases? | The operational considerations should include robust interference management, dynamic spectrum allocation, and real-time database updates. Interoperability with global standards and security mechanisms should be prioritised. |
| **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 rerun in the UK? | Adopting elements of the FCC's approval process where applicable could streamline the UK's approach. However, adjustments should be made to align with UK-specific regulatory and technical requirements. |
| **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 overall approach appears beneficial for improving connectivity, but a balanced spectrum management strategy must ensure minimal disruption to existing services. |

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| **Question 6**: Do you have any comments on our proposal to use a "phased" approach, or on the alternative to wait for European harmonisation? | A phased approach allows for early adoption and real-world testing, but alignment with European policies should be considered to maintain compatibility and avoid fragmentation. |
| **Question 7**: Do you have any comments on the above suggestion to manage any "legacy" Wi-Fi devices, or alternative suggestions? | Legacy Wi-Fi devices should be accommodated through backward compatibility mechanisms while encouraging transitions to new standards. |
| **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. | A significant portion of the spectrum should be allocated to Wi-Fi, given its role in supporting high-demand applications, particularly in dense urban environments. Furthermore this will spur innovation and development of new spectrum uses and wireless technologies for health, manufacturing, automotive, which otherwise will not be possible due to the lock in of licensed spectrum to operators. |
| **Question 9:** Do you have any comments on our plan for a "phase 1" when Wi-Fi will be introduced? | Phase 1 should include comprehensive performance and interference assessments to inform subsequent phases. |
| **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? | This approach could help seed the market while minimising interference risks, but it should be carefully managed to avoid unnecessary delays in full deployment. |
| **Question 11:** Do you have any comments on our plan for a "phase 2" when mobile will be introduced? | A carefully planned transition is required to balance mobile and Wi-Fi coexistence while ensuring fair spectrum access. |
| **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. | Mobile networks require sufficient spectrum for future 5G and 6G applications, but allocations should not compromise the benefits of Wi-Fi expansion. Recent studies show that the previous trend in the exponential growth mobile data have slowed down considerably and this should be taken into consideration. |

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| **Question 13:** Do you have any evidence or views about the geographical extent of mobile networks' likely deployment in Upper 6 GHz? | Mobile deployment in Upper 6 GHz is likely to be concentrated in urban and high-density areas, complementing sub-6 GHz and mmWave deployments. |
| **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? | A phased authorisation approach allows for careful coexistence management but requires clear transition strategies and regulatory oversight. |
| **Question 15:** Do you have any comments on our proposal to not include very low power portable devices in the Upper 6 GHz band at this stage, but to keep this under review? | This exclusion is reasonable as a temporary measure, but continued review is necessary to accommodate emerging use cases. |
| **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? | This authorisation supports next-generation wireless networks and should be pursued with appropriate technical safeguards. |
| **Question 17:** Do you have any comments on the proposed technical conditions? | Our preliminary modelling studies indicate that the technical conditions should ensure robust interference mitigation and compatibility with existing and future services. |
| **Question 18:** Do you have any comments on the proposed VNS draft? | Further analysis is required to assess the feasibility and impact of the proposed VNS framework. |
| **Question 19:** Do you have any suggestions for an appropriate mechanism for enhanced sensing, or comments on the proposed solution above? | AI-driven spectrum sensing and dynamic frequency selection could improve coexistence and efficiency. |
| **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. | Agreed, given the importance of radio astronomy observations, but alternative spectrum-sharing mechanisms should be explored. |

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| **Question 21:** Do you agree with our assessment of Wi-Fi coexistence with existing users of the band? If not, please provide details. | Further empirical studies are needed to validate coexistence assumptions and address potential interference concerns. |
| **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? | No comment. |
| **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? | Coexistence strategies should leverage advanced spectrum-sharing technologies to minimise disruption |
| **Question 24:** Do you have any other comments on our policy proposals or any of the issues raised in this document? | No comment. |