

Your response

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Question 1: Do you have any comments on our impact assessments as set out in Annex 1? Please specify whether your comments relate to: • our wider impact assessment; • our equality impact assessment; or • our Welsh language impact assessment.	Boeing welcomes and supports Ofcom’s consultative approach to considering additional spectrum for this rapidly evolving industry. This initiative will enable the continued growth of medium and large commercial uncrewed aircraft systems (UAS), especially in the 5030–5091 MHz band. We agree that these proposals will benefit stakeholders, consumers, and citizens, and will foster spectrum efficiency, growth, innovation and safety of life aviation services. Noting that spectrum regulation is only one aspect of safe air travel management and other agencies also have essential roles and regulatory input, i.e., the UK CAA and ICAO.
Question 2: Do you agree with our assessment of the 450 MHz and 5030–5091 MHz bands for drone control links? Do you agree there is demand for these bands in the UK (please identify any relevant use cases and locations in your response)? Are there any other frequency bands we should consider for control links?	The drone industry is expanding rapidly in the United Kingdom and globally. For example, UAS are rapidly transitioning from niche applications to operationally essential capabilities across several domains, most notably; commercial, public-sector and defence. Examples of such missions include: • medical • parcel and logistics deliveries • emergency response • infrastructure inspection and monitoring of remote and distributed assets • Advanced Air Mobility (AAM) platforms such as eVTOL (electric vertical take-off and landing) aircraft • public-safety and critical-infrastructure protection • UK research and innovation to enable the development and scaling of high-growth sectors (for example robotics and artificial intelligence) • enhanced defence capabilities, such as the ability to operate in high-risk environments without exposing military personnel As UAS adoption proliferates, they place novel and specific demands on scarce spectrum. To support these applications and enable complex operations such as beyond-visual-line-of-sight (BVLOS), access to secure,

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	dedicated, and reliable aeronautical command and non-payload communications (CNPC) bandwidth is essential. Licence-exempt or highly congested frequency bands are unable to deliver the consistency and reliability these missions require. The UK's stated ambition to remain a global aviation leader, with the UK Government estimating that the drone industry will contribute up to £103 billion to the UK economy over the next 25 years¹ – underlines the need for a policy environment that supports safe and scalable UAS operations. In our view, achieving that will require regulatory measures that deliver faster, more predictable approvals and improved operator experience without compromising safety. Although there are many existing aeronautical allocations in the ITU Radio Regulations, most predate autonomous aircraft and are heavily encumbered by legacy air traffic services. As a result, these allocations are considered inappropriate to meet UAS CNPC safety-of-life service requirements. The 5030 - 5091 MHz band was globally identified at WRC-12 for aeronautical CNPC. It therefore represented a rare opportunity to secure spectrum well suited to low-latency, reliable terrestrial CNPC required for line-of-sight (LOS) and BVLOS operations, globally. This was achievable in part because priority-status Microwave Landing Systems (MLS) in the same band were becoming obsolete. For these reasons, Boeing supports Ofcom's assessment that 5030 - 5091 MHz is a priority band for CNPC and should be restricted to safety-of-life communication applications. The allocation is essential to support future international UAS operating under ICAO air-safety standards.
Question 3: Do you have any comments on our proposed approach to coordinating drones with other users of the 450 MHz band? In your response, please indicate whether it relates to co-channel or adjacent	Boeing considers the 450–455 MHz band to be highly suitable for UAS CNPC operations, if coexistence with IMT identifications in the band is carefully managed. Ideally, IMT deployments should be positioned outside this range to mitigate potential interference risks to UAS CNPC links.

¹ See: <https://www.gov.uk/government/news/nearly-50-million-government-backing-to-power-up-drone-and-flying-taxi-tech-and-crack-down-on-illegal-drones>

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channel use, and provide evidence for any coexistence issues raised.	
Question 4: Do you have any comments on our proposed 450 MHz drone authorisation approach? Please provide any specific views (including technical justification where relevant) on: • the proposed technical conditions, including operating height AGL, power, channel bandwidth, designated service area, and number of base stations; • the proposed non-technical conditions, including licence fees and term, frequency flexibility and complying with CAA rules and radio equipment standards; and • reviewing our initial authorisation approach.	No comments.
Question 5: Do you have any comments on our proposed 5030-5091 MHz drone authorisation approach? Please provide any specific views (including technical justification where relevant) on: • the portion of the band proposed for early release (5040-5060 MHz); • the proposed technical parameters and approach to coordinating drones and/or protecting other users of the band; and • the proposal to phase out licences once there is global harmonisation, the required transition period and sunset clause.	Boeing welcomes Ofcom’s proposal to authorise the 5040 - 5060 MHz band for drone control links, which aligns with similar interim approaches taken by the US and Australia. The approach provides a practical and implementable way to accelerate UK deployments, whilst dedicated spectrum provides business surety, operational improvements to interference protection, greater flight distance and safer aviation. The size of the portion is initially a good balance between sufficient spectrum for early deployments. However, several administrations in Europe² (including the Netherlands, Italy and Finland) have identified additional spectrum for UAS CNPC links, in the frequency band 5030 - 5091 MHz in their respective national Table of Frequency Allocations. Boeing encourages Ofcom to regularly monitor usage of the 20 MHz allocation with a view to increase the allocation possibly for the entire

² See: <https://www.easa.europa.eu/en/domains/civil-drones/drones-regulatory-framework-background>

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	5030 - 5091 MHz band subject to demand. Noting that the Primary allocation to MLS in the frequency range is redundant and drones will not need to undertake coordination.
Question 6: Do you have comments on our proposal to create a new drone detection radar licence for the 24 GHz band, including the proposed technical and non-technical conditions, the proposed draft licence in Annex 12, and our coexistence analysis in Annex 6? Please provide evidence for any issues raised.	No comments.
Question 7: Do you have comments on our proposal to create a new drone detection radar licence for the 16 GHz band on a case-by-case basis, including the proposed technical and non-technical conditions and proposed draft licence in Annex 12? Please provide evidence for any issues raised.	No comments.
Question 8: Have you identified any other frequency bands we should consider for drone control links in the longer term?	Not at this stage. Boeing believes that the immediate priority should be to focus on access to the 450 MHz and 5 GHz bands, which are essential for delivering safe and reliable CNPC. We would welcome the opportunity to re-engage on additional longer-term spectrum options as the regulatory landscape and operational requirements evolve.
Question 9: Do you have any comments related to the existing satellite frequencies available for drone control links?	To fully utilise the 5 GHz frequencies for drone control, viable satellite services would be required, but these are not currently available. In the longer term, creating opportunities for satellite access to these frequency bands could encourage satellite operators to develop suitable capabilities. This would help enable BVLOS drone control across national borders and international waters.

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Question 10: What are your needs and priorities for accessing spectrum for drone safety? Do you have interest in future use of 15 GHz and/or 76 GHz, or other specific frequencies and bands for similar drone safety use?	As outlined in our response to Question 8, Boeing considers access to the 450 MHz and 5 GHz frequency bands to be an immediate priority, as both are essential for safe and reliable CNPC operations. We therefore recommend that regulatory attention remains focused on these bands in the near term. Once meaningful progress has been achieved on these, Boeing would welcome the opportunity to explore additional longer-term options, such as 15 GHz, 76 GHz or other suitable bands.
Question 11: Do you have any interest in ground based UAT to complement the aerial component in 978 MHz licences?	No comments.
Question 12: Are you interested in or do you have any plans to trial the use of ISAC for drone detection purposes?	No comments.
Question 13: Do you have any other comments on this consultation document?	No comments.