



Spectrum for Unmanned Aircraft Systems (UAS)


Approach to authorizing the use
of radio equipment on UAS



BT's response to Ofcom's
consultation



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BT Group

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1 Introduction

BT welcomes Ofcom's proposals¹ to introduce a new spectrum licence for drone operators that would cover authorisation of spectrum use for operation of drones beyond visual line of sight using mobile networks and other technologies (the "Consultation Document (CD)").

We set out our perspective of the future use of drones, and how the authorisation of these should be managed in **Section 2**.

In **section 3** we provide our responses to Ofcom's consultation questions.

Finally, in **section 4** we discuss next steps.

2 Our views on the use of drones

BT sees use of drones connected by mobile networks as an exciting innovation that if properly managed, could bring significant benefits to businesses and consumers. We are involved in Government funded collaborative research projects in this area and have committed significant internal research and development efforts to better understand and demonstrate the commercial opportunities, with a focus on optimising our network for drone safety and performance². We note that the Government also sees drones as a key area of growth³. We support the collaborative activity between Ofcom, CAA, Government and industry to develop the right regulatory framework to move forward with commercial drones in the UK.

We welcome Ofcom's initiative to develop a suitable authorisation framework from a Wireless Telegraphy Act licensing perspective. Broadly speaking we agree with the approach Ofcom is taking, but we do have a number of concerns on points of detail of how the process will be implemented, striking a balance between adherence to regulation by the network operator and simplicity to onboard drone operators. We note that mobile network operators cannot guarantee connectivity to drones in all circumstances as they are not optimised for that purpose. As such it must be understood that responsibility and liability arising to third parties from use of drones rests entirely with the drone operator and not the mobile network operator.

We believe that there is a need for ongoing collaboration between network operators and Ofcom, as well as with CAA to manage the regulation of drones and develop the requirements as this nascent industry and application evolves. We also anticipate that in the light of experience the regulations may need to be revised in future.

¹ https://www.ofcom.org.uk/data/assets/pdf_file/0035/238697/drone-condoc.pdf

² BT press release, July 2022 <https://newsroom.bt.com/future-flight-how-bt-is-taking-to-the-skies/>

³ Policy paper: Advancing airborne autonomy: use of commercial drones in the UK <https://www.gov.uk/government/publications/advancing-airborne-autonomy-use-of-commercial-drones-in-the-uk>

3 Response to the consultation questions

Question 1: Do you agree with the proposal to license drone equipment rather than to licence exempt? If you disagree, please provide the evidence that would support any disagreement with the proposals.

Yes, BT agrees that drone equipment should be licensed.

Question 2: Do you agree with the on the (*sic*) proposed authorisation approach for UAS? If you disagree, please provide the evidence that would support any disagreement with the proposals.

Yes, BT agrees that each UAS operator should be licensed.

Question 3: Do you have any comments on the proposed licence conditions?

BT agrees that written permission must be obtained from the mobile network operator for airborne use of terminals on its network and that the network operator may specify terms and conditions on use of its network. This is important from a technical perspective as drones have potential to cause interference or impact other users on the network in certain scenarios and thus a degree of control is necessary.

We understand the written permission could be done in a number of ways at the discretion of the MNO: for example as terms and conditions accepted by the customer when taking a suitable device and/or airtime product from the MNO; an email to the customer; or any other method the MNO may decide. The method may depend on whether the customer operates a single drone or multiple drones, and whether any additional restrictions are required by the MNO in the particular case.

We understand that the consent in writing that Ofcom will require a drone operator to obtain from the mobile network operator is simply permission to connect drones to the network and is not any guarantee of connection quality or levels of service. The responsibility to not use 2.6GHz and any other restrictions must also ultimately rest with the operator of the drones (as licensee) even if the means to do so are supported by the MNO. These points should be clarified in Ofcom's Statement.

We suggest that Ofcom clarifies in its Statement what action it expects MVNOs to take if one of their customers approaches them with a request to operate drones. We would expect that contracts between MVNOs and the relevant MNO could address this matter, but it would first be helpful if Ofcom's requirements are clarified. We would not expect Ofcom to allow MVNOs to unilaterally give written permission to drone operators to use a mobile network operator's network. That is to say the licence requirement to "have written permission for airborne use of its User Terminal (UE) from the mobile network(s) to which that UE connects" must be understood to mean physical rather than virtual mobile network operators.

We similarly request that Ofcom clarifies in its forthcoming Statement what it expects where SIMs used in the drones are issued from an operator outside the UK and international roaming is used to access the UK mobile networks. Again we assume permission would need to be obtained from the UK mobile network operator.

We also request that Ofcom clarifies that if MNO notifies the UAS licensee in writing that it withdraws its written consent (e.g. due to misuse), the UAS licence condition requiring written permission from the MNO is no longer fulfilled and the licence would no longer permits the holder to continue operating drones on the relevant MNO's network (although it could continue to use another MNO's network if the relevant written permission of that other MNO is obtained and not revoked).

The draft licence incorporates by reference various requirements set out in the OFW 597 licence conditions booklet⁴. However, the OFW 597 document itself states that “This booklet applies to the following licences:” followed by a table listing the licences. That table does not include any reference to the proposed new “Unmanned Aircraft Systems (UAS) Operator Radio Licence”. We assume that it is Ofcom’s intention to add this reference in the OFW 597 document when the new licence type is launched.

Question 4: Do you have any comments on the proposed list of equipment and associated conditions?

Yes, BT agrees with the inclusion of mobile network UE and the specified associated conditions.

BT has no comment on the other equipment and specified associated conditions. BT agrees with Ofcom’s conclusion that in a UK context no additional technical restrictions are required other than in the 2.6 GHz band.

BT agrees that the licence fee should be based on recovery of Ofcom’s costs.

Question 5: Do you agree with Ofcom’s assessment on whether to introduce UAS operator licences? If you disagree, please provide further information.

Yes, BT agrees with Ofcom’s approach, at least in the initial phase of development of drones use.

4 Next steps

BT would be happy to meet with Ofcom to clarify our response of any questions that arise that would assist Ofcom in preparing its Statement.

We would be happy to participate in any industry discussions that Ofcom may organise from time to time, for example to discuss the application of the drone regulations and share best practice.

⁴ https://www.ofcom.org.uk/_data/assets/pdf_file/0016/214117/emf-glc-licence-conditions-booklet.pdf



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