



Vodafone Response to Ofcom Consultation: Spectrum for Unmanned Aircraft Systems (UAS)

Approach to authorising the use of radio equipment on UAS



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.

We agree with the proposal.

Although both trials and coexistence studies have indicated that it is possible for drones to incorporate mobile terminals without interfering with wider usage of the mobile network, the action of making usage licence-exempt is fundamentally a one-way step that would be practicably impossible to reverse if issues did subsequently emerge, particularly those that might only manifest themselves at scale. Given the requirement to license non-line-of-sight drones more widely, we do not consider that additionally licensing any spectrum usage would result in any undue administrative burden. Vodafone will facilitate usage of our network and put in place mechanisms to endorse Ofcom's authorisation regime.

If the licensed approach proves trouble-free from a technical perspective, we believe the issue of licence-exempting usage could be addressed at a later stage.

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

We agree with the proposal.

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

On the whole we agree with the proposals. We note, however, the proposal that the licences are indefinite, subject to payment of an annual licence fee. Whilst not objecting to the concept of indefinite licences, we consider that there should be a restriction that this annual renewal is subject to the consent of the mobile operator licensee of the spectrum in question. Whilst we would not expect to explicitly approve each renewal, we believe that there should be the opportunity for mobile operators to object to ongoing licensing, especially where it can be demonstrated that harm is being caused to wider usage of the mobile network. This may have been Ofcom's intent in that for example Table 1 of the consultation sets out that the Licensee must have written permission from the mobile network(s) involved, but we believe that this was envisaged at the point of awarding the licence rather than necessarily at renewal.

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

Noting that Table 1 contains conditions for the usage of various spectrum bands, our assumption is that a given licence will either contain conditions for usage of specific spectrum bands, or will contain all of the conditions but with a checkbox to state which are applicable (i.e. for the avoidance of doubt, a licensee won't



by default be authorised to use all of the bands in Table 1, whether or not they've asked for this, on the off-chance that they might need them in the future).

With respect to the mobile bands, we seek confirmation from Ofcom that the licence will provide consent to use the mobile frequencies licensed to one or more mobile networks (according to which network operator(s) has/have given consent), and that the transmit power levels etc will align with those in the relevant licence-exemption regulations for terminal equipment.

4. Do you agree with Ofcom's assessment on whether to introduce UAS operator licences? If you disagree, please provide further information.

We agree with the impact assessment.

Vodafone UK
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