



Virgin Media O2 response to Ofcom Consultation:

Enabling Satellite Direct to Device services in Mobile spectrum bands

Non confidential version

May 2025

INTRODUCTION

Virgin Media O2 (“VMO2”) welcomes the opportunity to respond to Ofcom’s consultation on Enabling Satellite Direct to Device services in Mobile spectrum bands.¹

GENERAL COMMENTS

As we set out in our response to the July 2024 Call For Input², we agree with Ofcom that Direct to Device (“D2D”) satellite services can provide benefits for UK consumers and businesses. They can be used to complement existing mobile service and enable MNOs to infill not-spots and extend outdoor coverage even further into rural and remote areas, including very hard to reach areas beyond the scope of the Shared Rural Network.

We agree with Ofcom’s statement at 2.37 in the consultation:

“...our proposals will support growth in the UK by enabling an innovative new service to be offered to UK consumers and businesses, through a flexible authorisation framework ahead of WRC-27, making it easier for operators to rollout mobile coverage to areas not reached by current and planned terrestrial infrastructure”.

This enablement will align with the Government’s core agenda to increase economic growth in the UK. It provides a clear opportunity for Ofcom to demonstrate that it is acting appropriately to ensure that regulation is not a brake on growth and innovation.

Before benefits can be enabled, an appropriate authorisation framework needs to be provided to allow D2D services to operate in the UK. We welcome Ofcom’s proposals to authorise D2D services to use mobile handsets and to use a subset of mobile spectrum licensed to MNOs, subject to a commercial agreement between the MNO and the Satellite Operator.

Ofcom’s proposals align closely with the minimum requirements that we highlighted as being important in our response to the 2024 Call For Input. We welcome the fact that Ofcom is now proposing an authorisation approach that would remove existing barriers to partnerships, and will ensure that the risk of harmful interference from D2D services is minimised.

We agree with Ofcom’s preferred authorisation approach, Option 2. A discretionary licence exemption for mobile handsets that connect to D2D services provided by an MNO, whose spectrum licence has been varied by Ofcom, to include coordination clauses for the provision of D2D services.

Option 2 will deliver the best outcomes. It will enable an MNO to partner with a Satellite Operator to provide D2D services, whilst also providing the MNO with a strong incentive to

¹ [Consultation: Enabling Satellite Direct to Device services in Mobile spectrum bands](#)

² [Improving mobile connectivity from the sky and space](#)

manage potential interference, thus protecting mobile terrestrial networks and customer experience.

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The remainder of our response focusses on Ofcom's specific questions.

RESPONSE TO SPECIFIC QUESTIONS

Question 1: Do you agree with our assessment of the business models that could potentially emerge?

Yes. We agree that a range of business models could potentially develop in the UK.

We welcome Ofcom's stated intention to be neutral as to specific business models, subject to its broader duties around spectrum management and competition.

Question 1(a): Are there any other business models that you think could deliver benefits for people and businesses in the UK?

We believe that Ofcom has identified the most likely main business models that could deliver benefits for consumers and businesses in the UK.

Question 1(b): Are there any business models that could not operate under our proposed approaches?

Our view is that the likely main business models would be able to operate under Ofcom's proposed approach.

Question 2: Do you agree with our assessment of the benefits that could be realised through authorisation of D2D services?

Yes, we agree.

Question 2(a): Are there any other benefits for UK citizens and businesses that could be realised?

In addition to the benefits that Ofcom highlights in the consultation, D2D services could also enable improved coverage and connectivity for IoT devices.

Question 3: Do you have comments on how emerging D2D technology should support 999 service provision?

We agree with Ofcom that D2D services could help improve access to the emergency services and that the experience of using D2D networks and the services offered will likely evolve over time.

As Ofcom highlights in the consultation, General Condition A.3 requires providers of Voice Communications Services to ensure uninterrupted access to emergency organisations. For existing terrestrial mobile networks, this is expected to be achieved through MNOs supporting emergency call roaming. This enables customers of one MNO to make an emergency call through another MNOs network if they are outside the coverage of their home network, either due to limitation of the home network reach, or in rare cases of serious network failure.

We observe that Ofcom's General Conditions have been in existence for a considerable number of years and were not drafted with D2D services in mind. It is not currently clear how a D2D service that provides a Voice Communications Service would be expected to provide uninterrupted access to emergency organisations in the event the D2D service were to experience a serious network failure.

We welcome Ofcom's intention to undertake bilateral engagement on this subject with MNOs and prospective D2D satellite providers.

Question 4: Are there any mobile spectrum bands not in scope of our proposals that you think we should consider?

We agree with the mobile spectrum bands proposed by Ofcom.

We expect that individual Satellite Operators may support various spectrum bands depending upon their capability and roadmap.

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Question 5: Does deployment in supplementary downlink spectrum (SDL) present any challenges in comparison to other bands? Is there interest in deploying in this spectrum?

We expect that the feasibility of deployment in SDL spectrum will be largely dependent upon the capability and roadmap of the Satellite Operator. Considerations include SDL spectrum requiring aggregation with another spectrum band, increasing the complexity of design and that the SDL frequencies may not be supported by all UE.

Question 6: Do you agree with our proposal to limit this authorisation to the UK mainland and territorial waters? If not, please explain why.

Yes, we agree.

Question 7: Do you agree that our proposed technical conditions for D2D satellite emissions will protect mobile services delivered by other operators in adjacent areas and in adjacent spectrum?

Yes, we agree. However, VMO2 acknowledges the current work under WRC-27 agenda item 1.13 that could result in different final limits. In this regard, we note Ofcom's stated intention that it will likely amend the conditions, as part of a review of the framework, following the outcome of WRC-27.

Question 8: Do you agree with our high-level co-existence assessment for other services in adjacent spectrum to D2D?

Yes, we agree.

Question 9: Are there other services co-channel or in adjacent spectrum that you think we should take into account when assessing coexistence? If so, please provide evidence of the nature of interference and what level of protection you consider is necessary.

We believe that Ofcom has identified the relevant services.

Question 10: Do you agree with our preferred authorisation approach (option 2)? If not, please set out your reasoning.

Yes. We agree with Ofcom's preferred authorisation approach (option 2).

Option 2 will deliver the best outcomes. It will enable an MNO to partner with a Satellite Operator to provide D2D services, whilst also providing the MNO with a strong incentive to manage potential interference, protecting mobile terrestrial networks and customer experience.

During the licence variation process Ofcom will have sight of the agreement between the MNO and the Satellite Operator. The extent to which an MNO will have the ability to adhere to the interference obligations within its licence will be determined by the content of that contract. As a matter of policy, we would expect Ofcom to make a clear statement that should the contract not be adhered to by the Satellite Operator and all contractual recourse has been exhausted by the MNO, Ofcom would seek to resolve the situation directly with the Satellite Operator, rather than through recourse to an MNO licence infringement.

As the Satellite Operator apparatus is outside the UK and is not terrestrial, such an unlikely eventuality is effectively an exogenous factor outside the control of the MNO.

Question 11: Are there any alternative authorisation options, not discussed here, that you believe are worth considering?

We believe that Ofcom has identified the correct authorisation option (option 2).

Question 12: Do you agree with the proposed conditions?

Yes, we agree. However, VMO2 acknowledges the current work under WRC-27 agenda item 1.13 that could result in different final limits. In this regard, we note Ofcom's stated intention that it will likely amend the conditions, as part of a review of the framework, following the outcome of WRC-27.

Question 13: Do you have any other comments on the proposals set out in this document?

As we stated in our response to the July 2024 Call For Input, we welcome Ofcom's intention to continue to participate in studies and negotiations pertaining to D2D services at the ITU. It is important that the ongoing work to establish an international harmonised framework for D2D services is followed closely.

We also support Ofcom's proposal that, following the outcome of WRC-27, it intends to review the technical conditions it will introduce, as part of an overall review of its framework.