

# Amazon Kuiper UK Limited application for a non-geostationary gateway earth station licence

Decision

**Statement** 

Published 30 October 2025

# **Contents**

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1.	Overview	3
2.	Introduction and background	5
3.	Assessing the impact on NGSO coexistence	8
4.	Assessing the impact on competition	16
5.	Additional comments	20
6.	Our decision	25
An	nex	
A1.	Impact assessments	26

## 1. Overview

- 1.1 This document sets out our decision on an application by Amazon Kuiper UK Limited (an affiliate of Kuiper Systems LLC, referred to in this document as 'Kuiper') for a UK wireless telegraphy satellite non-geostationary earth station licence (an NGSO gateway licence). This licence would authorise Kuiper to operate a non-geostationary orbit (NGSO) gateway earth station in the Ka band in Bude, Cornwall, to connect to its planned NGSO satellite system (the 'Kuiper system'). This gateway would support Kuiper's plans to provide wireless broadband and backhaul services from its Kuiper system. We granted an NGSO network licence to Kuiper in February 2025.
- 1.2 NGSO systems are a way of delivering broadband services from space using a constellation of satellites, usually in a low or medium orbit. They have the potential to deliver high speed and low latency services to consumers, customers and citizens. Gateway earth stations connect the NGSO satellite system to the internet or private networks.
- 1.3 Our <u>initial assessment of Kuiper's NGSO gateway licence application in our July 2025</u>
  <a href="mailto:consultation">consultation</a> (the Kuiper gateway consultation) proposed that we grant Kuiper an NGSO gateway licence. We have now assessed stakeholders' responses regarding the ability of Kuiper's gateway earth station to coexist with other current and future NGSO licensees and considered the competition issues raised by stakeholders in their submissions.

#### What we have decided - in brief

#### We have decided to grant an NGSO gateway licence to Kuiper.

This decision will enable Kuiper to operate a satellite gateway to provide satellite connectivity services in the UK to households, businesses and other customers, as well as backhaul connectivity services, using Ka band frequencies between 27.5-27.9505 GHz, 28.4445-28.9585 GHz and 29.4525-30 GHz.

On coexistence, we consider that Kuiper has provided the necessary evidence to show that its NGSO gateway should be capable of coexisting with current and future NGSO systems and gateway earth stations in the Ka band in the UK, and are assured that its NGSO system is designed with sufficient flexibility to mitigate harmful interference should it arise. We are also satisfied that Kuiper has provided suitable evidence of coordination discussions with other NGSO licensees and that it intends to continue its efforts to cooperate with other licensees.

In addition, we assess that the competition risks from approving Kuiper's application for an NGSO gateway licence are low, and that the proposed gateway site would benefit UK consumers, customers and citizens.

We will now proceed to issue Kuiper with an NGSO gateway licence to operate in Ka band frequencies 27.5-27.9505 GHz, 28.4445- 28.9585 GHz and 29.4525-30 GHz, subject to payment of the licence fee. A copy of the licence will also be available under the "Existing licences" section of our NGSO licensing webpage.

The overview section in this document is a simplified high-level summary only. Our decision and reasoning are set out in the full document.

# 2. Introduction and background

- Our NGSO licensing process for considering applications for NGSO spectrum licences aims to enable citizen and consumer benefits such as improved connectivity. It was designed to encourage greater cooperation between NGSO licensees, enhance our ability to intervene if harmful interference arises, safeguard competition, and ensure greater transparency through a short consultation process. Our approach to NGSO licensing is set out in our 2021 statement on licensing NGSO satellite systems (the 2021 NGSO statement), and guidance for NGSO applicants on the licensing process.
- 2.2 Our NGSO licensing process covers two types of NGSO licences:
  - Satellite (earth station network) licence for NGSO use: authorises an unlimited number of
    user terminals, for example a satellite dish, to connect to the NGSO satellite system (the
    NGSO network licence).
  - Satellite (non-geostationary earth station) licence: authorises gateway earth stations
    connecting the NGSO satellite system to the internet or private network (the NGSO gateway
    licence).
- 2.3 This decision document relates to the second of these licences: an NGSO gateway licence.
- 2.4 The NGSO gateway licence covers UK earth station hubs connecting an NGSO satellite system to the internet and/or private networks or cloud services. We require the holder of the NGSO gateway licence to have control over the gateway earth station (so it is typically held by a satellite or teleport operator), and to only operate gateway(s) in connection with a licensed NGSO system under an NGSO network licence. It also places other conditions on licensees, including that gateway(s) must become operational within 12 months of the licence being granted, and managing the gateway to prevent harmful interference (see condition 5 "Additional conditions"). All NGSO licences are listed in the "Existing licences" section of our NGSO licensing webpage.

#### Kuiper's application and proposed NGSO gateway

2.5 We received a completed application from Amazon Kuiper UK Limited (an affiliate of Kuiper Systems LLC, referred to in this document as 'Kuiper') on 12 June 2025 for an NGSO gateway licence to operate a gateway earth station in Bude, Cornwall. This gateway earth station will connect to Kuiper's first generation (Gen 1) NGSO constellation. We authorised Kuiper to operate terminals in the UK under its NGSO network licence, issued on 18 February 2025.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> We are currently consulting on a proposal to remove this requirement in cases where the terminals are licence exempt (see paragraphs 4.8-4.13 of our <u>September 2025 NGSO licensing review consultation</u>).

<sup>&</sup>lt;sup>2</sup> The NGSO network licence is licensed to Amazon Kuiper Services Europe SARL. Both Amazon Kuiper Services Europe SARL and the applicant for this NGSO gateway licence, Amazon Kuiper UK Limited, are wholly owned subsidiaries of Amazon.com, Inc. For simplicity, in this document we refer to both licensees as 'Kuiper'.

- 2.6 Kuiper indicated that its NGSO constellation will operate in accordance with the satellite filings for its Gen 1 NGSO system,<sup>3</sup> with the following references: USASAT-NGSO-8A, USASAT-NGSO-8B, and USASAT-NGSO-8C, and has requested to use Ka band frequencies: 27.5-27.9505 GHz, 28.4445- 28.9585 GHz, and 29.4525-30 GHz<sup>4</sup> for this NGSO gateway.
- 2.7 In its NGSO gateway licence application, Kuiper stated that this gateway would support its plans to provide high speed, low latency wireless broadband services from satellites to a variety of retail and wholesale customers in the UK including households, schools, hospitals, government offices, businesses, first responders, and disaster relief operations. This gateway is also intended to support Kuiper to provide backhaul connectivity to telecommunications carriers. Kuiper planned to offer these services throughout the UK,<sup>5</sup> and expects more than 75% of its customers will be located outside the southeast of England, including in Wales, Scotland and Northern Ireland.
- 2.8 Globally, Kuiper planned for its gateway earth stations to be distributed throughout its NGSO system's service area, such that each Kuiper satellite can ideally access two different gateway earth stations at a time.
- 2.9 Further information about Kuiper's NGSO gateway licence application can be found on our NGSO licensing webpage (reference: KUIPER-GAT-1).

#### **Consultation and summary of responses**

- 2.10 Taking account of the evidence presented by Kuiper, we published a <u>consultation</u> on 1 July 2025 (the Kuiper gateway consultation), setting out our preliminary view to grant Kuiper an NGSO gateway licence, and invited comments on Kuiper's NGSO gateway licence application and our views. We noted we were open to changing those views depending on responses and evidence submitted to us as part of the consultation process. The Kuiper gateway consultation closed on 29 July 2025.
- 2.11 We received four responses to this consultation. We have now published the three non-confidential responses alongside Kuiper's application and consultation on our website; two of these respondents requested to remain anonymous. One response was fully confidential, and this respondent agreed to us referencing the contents of its responses as summarised in this statement.
- 2.12 In response to issues raised by some respondents, we requested further clarification from Kuiper regarding the information provided about its satellite filings and the methodology used in its coexistence analysis. Kuiper's response to our request for clarification is now also published on our <a href="website">website</a>. We have taken Kuiper's reply into account in reaching our decision.

<sup>&</sup>lt;sup>3</sup> Kuiper's second generation (Gen 2) NGSO system will operate under the following satellite filing references: KBSAT-NGSO-P-R, USASAT-NGSO-8E and USASAT-NGSO-8F. Kuiper states that none of these filings are in use with this application for an NGSO gateway licence in Cornwall.

<sup>&</sup>lt;sup>4</sup> These relate to Kuiper's proposed uplink frequencies. Kuiper's application also indicated its proposed downlink frequencies will be 17.7-18.6 GHz and 18.8-20.2 GHz.

<sup>&</sup>lt;sup>5</sup> Kuiper stated that the coverage limit of its Gen 1 NGSO system is 56 degrees latitude north (which we noted crosses Scotland at Falkirk and the Firth of Forth), and that it planned to cover latitudes above 56 degrees in future generations of its NGSO system.

2.13 We have carefully considered all relevant consultation responses in finalising our decision Kuiper's licence application. This document summarises the main points made by stakeholders in their submissions and our assessment of those points, under headings prompted by the six questions we asked in the consultation. We have collated answers under the most appropriate heading; in some cases, this means respondents' comments are addressed under different headings to those they used.

#### Structure of this document

- 2.14 The rest of this document is structured as follows:
  - Section 3 assesses respondents' views on the capability of Kuiper's NGSO gateway to coexist with other (current and future) NGSO systems;
  - Section 4 assesses stakeholders' responses on the potential competition risks and benefits arising from Kuiper's NGSO gateway licence application;
  - Section 5 covers any other comments provided on the Kuiper gateway consultation, as well as responses regarding our equality and Welsh language impact assessments;
  - Section 6 summarises our decision and next steps; and
  - Annex 1 sets out our impact assessments, including on equality and the Welsh language.

# 3. Assessing the impact on NGSO coexistence

- 3.1 Our 2022 Space Spectrum Strategy sets out our aspiration to enable as many NGSO systems as possible, to provide services and increase choice for citizens and consumers in the UK. NGSO satellites are dynamic by nature, creating a complex spectrum management environment, both in space and on the ground. We recognise the importance of ensuring that different NGSO systems are able to operate alongside each other without increasing the risk of harmful interference, and this is one of the aims of our NGSO licensing process.
- 3.2 The International Telecommunication Union (ITU) Radio Regulations mandate that NGSO satellite operators establish coordination agreements to prevent harmful interference. An order of precedence is assigned to a satellite system or network based on its satellite filing submission date, and operators must seek an agreement with operators of earlier filed systems and networks. Ultimately, the notifying administration that submits the satellite filing is responsible for ensuring that operators comply with these ITU obligations.

#### Coexistence with existing NGSO systems

- 3.3 As set out in paragraph 2.4, both an NGSO network licence and an NGSO gateway licence are currently needed to govern the operation of an NGSO gateway earth station, and ensure it protects other spectrum users (see condition 5.2 of the NGSO gateway licence). Together, they impose conditions on the operation of the whole NGSO system, including an obligation to cooperate with other NGSO licensees and to take action to mitigate harmful interference.
- 3.4 When applying for an NGSO gateway licence, we ask applicants to demonstrate how coexistence is possible between their NGSO gateway and other NGSO systems or gateways already licensed in the UK (as well as any NGSO licence application consultations) that will operate in the same frequency band(s). Applicants should also show how they are able to coexist with other specific co-frequency earth stations registered with the ITU.<sup>6</sup>
- 3.5 In the Kuiper gateway consultation, we noted the UK's existing NGSO gateway earth stations (in table 2), which all connect to Starlink's NGSO constellation, with each individually licensed to operate in the Ka band:
  - four licences are held by Starlink (for Morn Hill, Fawley, Wherstead, and Woodwalton);
  - one licence is held by Arqiva Ltd (for Chalfont); and
  - one licence is held by Goonhilly Earth Station Limited (for Goonhilly).
- 3.6 In addition to Kuiper, there are also five NGSO network licensees (Rivada Space Networks GmbH (Rivada), Mangata Edge Ltd (Mangata), Telesat LEO Inc (Telesat), NSLComm Ltd

<sup>&</sup>lt;sup>6</sup> These are listed at the bottom of our NGSO licensing webpage.

<sup>&</sup>lt;sup>7</sup> At the time of consultation, Starlink also held a fifth NGSO gateway licence for the Isle of Man, but this licence has since been surrendered.

(NSLComm) and joint licensees Inmarsat Global Limited (IGL) and Space Norway Heosat AS (SN)<sup>8</sup>), who plan to operate terminals using frequencies in the Ka band.<sup>9</sup> As both an NGSO network and NGSO gateway licensee, <sup>10</sup> Kuiper will have control over the full NGSO system, including customers' access to the satellite network from any user terminals or earth stations operating from the ground. This control includes the ability to act upon and eliminate any interferer transmission(s) at any time.

- 3.7 We note the co-frequency earth stations registered with the ITU under Article 9 of the ITU Radio Regulations with which Kuiper is also required to coexist. Kuiper stated in its application that it will protect these co-frequency earth stations.
- 3.8 Additionally, in support of its NGSO gateway licence application, Kuiper provided further information on its coordination agreements and ongoing discussions with existing NGSO licensees. Kuiper explained that it has already completed ITU coordination with Telesat and SN, and that coordination agreements have not yet been completed with other UK NGSO licensees in the Ka band. It therefore provided technical coexistence analysis as part of its NGSO licence application to show it was also able to coexist with these licensees. Kuiper explained that its analysis had "made a number of conservative assumptions ... to demonstrate that coexistence is possible even in worst-case scenarios. This ensures coexistence would be possible in realistic operational scenarios". This analysis shows average degraded throughput and increase in unavailability for Rivada, Mangata, and NSLComm's NGSO systems, as well as Starlink's NGSO gateways.
- 3.9 It is important to note that NGSO gateways are permitted to operate across a wider range of frequencies than user terminals in the UK. Currently all gateways operate in the Ka band. For the purposes of assessing whether Kuiper's proposed gateway can coexist with other NGSO systems, in this statement we have only considered the frequencies shared by both gateways and user terminals.
- 3.10 In the Kuiper gateway consultation, our preliminary view was that based on the information provided, Kuiper's proposed NGSO gateway should be capable of coexisting with these other NGSO systems and gateway earth stations. This is because, even under the conservative assumptions adopted by Kuiper in its coexistence analysis, its NGSO gateway would have a minimal impact on existing NGSO network and NGSO gateway licensees in the UK. We also reiterated that all parties should continue coordinating in good faith, noting that our NGSO licence conditions require licensees (including Kuiper) to cooperate with each other so they can coexist.
- 3.11 We asked stakeholders the following question:

<sup>&</sup>lt;sup>8</sup> We accepted IGL/SN's NGSO network licence application after publishing the Kuiper gateway consultation, which meant Kuiper was not required to submit coexistence analysis for IGL/SN's NGSO system as part of its application. However, we note that Kuiper explained in its application that it has already completed coordination with SN (see footnote 6 of the Kuiper gateway consultation).

<sup>&</sup>lt;sup>9</sup> Other existing NGSO network licensees (Starlink, Network Access Associates Ltd, a subsidiary of Eutelsat OneWeb, and Kepler Communications Inc.) operate terminals using frequencies in the Ku band.

<sup>&</sup>lt;sup>10</sup> The NGSO network licence is held by Amazon Kuiper Services Europe SARL which, like the applicant, is a wholly owned subsidiary of Amazon.com, Inc. In this document we refer to both licensees as 'Kuiper'.

#### Consultation question 1

Do you anticipate this NGSO gateway earth station will pose coexistence challenges to existing NGSO services?

#### **Consultation responses**

- 3.12 We received one non-confidential response from Viasat to question 1 on the coexistence challenges that might arise for NGSO services.
- 3.13 Viasat noted that it had raised concerns in response to the September 2024 consultation regarding Kuiper's NGSO network licence application (the <u>September 2024 consultation</u>). It believed these concerns continue to exist and are relevant to the consultation on Kuiper's NGSO gateway licence application, so it had updated its previous analysis with additional information and analytical material to reflect the latest ITU work. As a result of its work, Viasat urged us "to deny Kuiper's request for a further licence".
- 3.14 Its concerns centred on the methodology Kuiper used in its coexistence analysis relating to:
  - a) weighted time-average throughput degradation; and
  - b) unavailability degradation.
- 3.15 Viasat stated that there was no consensus on these methodologies and that they have not been established as suitable for evaluating the impact of interference associated with NGSO systems. It pointed to disagreements captured in the form of editors notes in an ITU Working Document<sup>11</sup> as evidence of this.

#### Throughput degradation methodology

- 3.16 On throughput degradation, Viasat noted that Kuiper "had again used an assessment based on weighted time-average" and that it had previously raised concerns with this approach.
- 3.17 Viasat indicated Kuiper's coexistence analysis had referenced <a href="ITU-R Recommendation">ITU-R Recommendation</a>
  <a href="S.2131">S.2131</a>, which provides "a method for determining performance objectives for satellite hypothetical reference digital paths utilising adaptive coding and modulation (ACM)". Viasat observed that this recommendation does not specify the time period over which this criterion should be computed; it said Note 4 states that "the time-average throughput over any year does not provide sufficient information on link performance for specific time percentages for any given time period during the year". It argued therefore that the "annual average throughput criteria should not be the sole determinant for assessing NGSO emissions impact on NGSO or GSO<sup>12</sup> link performance".
- 3.18 Viasat further pointed to several contributions<sup>13</sup> that had been submitted to the ITU, particularly at Working Party 4A (WP4A),<sup>14</sup> which it said aimed to highlight and address

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<sup>&</sup>lt;sup>11</sup> Annex 43 to WP4A chair's report 4A/567, dated 15.05.2025, Working Document Towards Preliminary Draft New Report ITU-R S.[Interference-NGSO-NGSO/GSO].

<sup>&</sup>lt;sup>12</sup> Geostationary orbit.

<sup>&</sup>lt;sup>13</sup> Viasat referenced two studies in particular: a) <u>Document 4A/270</u> which it states assesses the impact of NGSO systems on GSO networks using average throughput degradation criteria in the 10.7 and 52.4 GHz frequency ranges, and b) <u>Document 4A/826</u> which refers to an example for a link using ACM resulting in different degradation levels when assessing average or certain time periods.

<sup>&</sup>lt;sup>14</sup> WP4A of the ITU studies orbit/spectrum efficiency, interference and coordination, and related

these concerns. It considered these studies "unequivocally indicate that the annual average throughput degradation criteria defined in the ITU Radio Regulations No. 22.5K and 22.5L fails to appropriately and reliably assess the impact of NGSO systems on GSO networks or NGSO systems". It argued that "a more comprehensive assessment method, taking into account more granular time-specific impacts, is imperative to ensure appropriate coexistence between NGSO systems and to limit long-term NGSO system interference".

#### **Unavailability degradation methodology**

- 3.19 Viasat said that in the case of the short-term impact of Kuiper's NGSO system, there had been "no studies conducted on the absolute unavailability degradation methodology in the ITU" and that proposals on this methodology had been either opposed outright at ITU WP4A or invited calls for studies<sup>15</sup> "on the basis that it does not adequately protect the interference recipient system and caps its availability performance with no room for further improvements". It said that implementing this approach "would almost certainly result in frequent outages and a degraded user experience for GSO networks, irrespective of their architectural design".
- 3.20 Viasat noted that Resolution 770 and No. 22.5L of the ITU Radio Regulations provide relative degradation to unavailability as criteria to assess short term interference impact from NGSO systems. It suggested that if we wish to deviate from ITU standards, we should conduct an "independent assessment of the new 'absolute' unavailability criteria on both single-entry and aggregate basis and how it could impact both GSO networks and NGSO systems".

#### Our assessment

- 3.21 In line with paragraph 3.4, our assessment in this document considers whether Kuiper's NGSO gateway is able to coexist with other NGSO licensees in the UK. <sup>16</sup> Applicants for NGSO gateways are not required to demonstrate coexistence of their NGSO system as a whole, including with other services (GSO services, radio astronomy or fixed links), as this is typically assessed as part of their NGSO network licence application.
- 3.22 We assessed Kuiper's NGSO system as a whole through our <u>September 2024 consultation</u>, and set out our reasoning for granting this licence in our <u>February 2025 statement</u>.
- 3.23 Some issues raised in response to question 1 relate to Kuiper's NGSO system as a whole rather than this specific gateway application. These are not pertinent to this specific licensing decision given our published approach. However, we have taken account of these responses in our reasoning as relevant to the impact the application might have in the round, and address the responses below for completeness.
- 3.24 Our February 2025 statement also set out our position on the methodology applicants adopt for their coexistence analysis (see paragraphs 3.23-3.25 of that statement). We noted our NGSO licensing process seeks to confirm whether an applicant shows it is capable of

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aspects for fixed satellite service (FSS) and broadcasting-satellite service (BSS). Its outputs have significant relevance to preparatory work on satellite services for WRC.

<sup>&</sup>lt;sup>15</sup> Viasat included a reference to Annex 46 to 4A/567, dated 15.05.2025, Working document towards a preliminary draft new Recommendation on maximum allowable aggregate interference levels from time-variant sources from other services into fixed-satellite service links.

<sup>&</sup>lt;sup>16</sup> It also examines the effect of this application on competition.

- coexisting with other NGSO licensees. Technical analysis is one element of this assessment and is provided to demonstrate this capability, rather than the precise expected impact on any specific NGSO system.
- 3.25 We expect applicants to determine how to best illustrate the impact of their NGSO system (or gateway) on other NGSO licensees. Kuiper has chosen to use the two metrics provided as examples in our NGSO licensing guidance in the technical analysis supporting its NGSO gateway application (which it also used to support its NGSO network application). We continue to consider the metrics Kuiper have used to be a reasonable proxy for demonstrating coexistence with others.
- 3.26 In our decision-making, we consider the technical analysis alongside other measures taken by an applicant to reduce its risk of harmful interference, such as coordination discussions with other NGSO systems. We note Kuiper's existing coordination agreements with Telesat and SN and that it continues to progress its coordination discussions with other satellite operators. Our position remains that we are assured that Kuiper is taking reasonable measures to reduce its risk of harmful interference, including in its approach to this NGSO gateway.
- 3.27 Further, we noted the responsibility for ensuring that satellite operators comply with their ITU obligations, including managing coexistence between satellite filings, and shared use of space resources, ultimately rests with the notifying administration responsible for the NGSO system (see paragraph 3.2 for an overview of the relevant elements of the ITU regulatory framework). For Kuiper's NGSO system the notifying administration is the FCC (Federal Communications Commission).
- 3.28 We have considered Viasat's response on Kuiper's capability for its NGSO gateway to technically coexist with other NGSO systems (and gateways) and discuss this further below.

#### Throughput degradation methodology

- 3.29 On throughput degradation, we note the concerns raised by Viasat about the weighted time-average throughput methodology, including its view that there is no consensus on the detailed implementation of this methodology at an international level. We were aware that Viasat has also raised these concerns in its contribution documents to the ITU's WP4A (as referenced in its response).
- 3.30 As acknowledged by Viasat, our NGSO licensing process aims to reinforce ITU processes rather than to replicate or replace them, and ITU WP4A is continuing to study and discuss this methodology. In light of this, we do not consider it would be appropriate for us to determine a UK-specific view at this point. We will consider the application of future international decisions to our NGSO licensing process as appropriate.
- 3.31 In relation to ITU Recommendation S.2131, we requested clarification from Kuiper to explain how its coexistence analysis had taken account of the points set out in Note 4. In its response, Kuiper explained that it had "evaluated GSO protections based on the specific requirements outlined in ITU Recommendation S.2131. The recommendation clearly establishes in its 'recommends' section (not just in 'noting' statements) that satellite systems using ACM should be designed to meet performance objectives based on packet error ratio (PER) or spectral efficiency metrics and compare these metrics to rain fade statistics given in Recommendation P.618." Finally, it explained that "while Note 4 mentions that additional throughput metrics could be considered, evaluating such metrics would

- require detailed knowledge of other operators' specific performance requirements information that is not available to Kuiper. Therefore, our assessment appropriately follows the established technical standards by evaluating average throughput degradation as specified in Section 2.4."<sup>17</sup>
- 3.32 We are satisfied that Kuiper's explanation of how it has applied the methodology in ITU Recommendation S.2131 is reasonable. This is because Note 4 suggests that "additional performance requirements for overall performance may be stated in terms of throughput/spectral efficiency as a function of percentage of a year" but does not provide a specific methodology for doing this, rather suggesting that "the above-mentioned percentages may require further studies".
- 3.33 We are also satisfied Kuiper has shown in its analysis that the throughput degradation arising from its proposed NGSO gateway would have a minimal impact for existing NGSO network licensees.

#### **Unavailability degradation methodology**

- 3.34 We also note Viasat's concerns about the absolute unavailability methodology and that it believes this would almost certainly result in frequent outages to GSO networks. As explained earlier in paragraphs 3.21-3.23, applicants for NGSO gateway licences are not required to assess impacts on GSO networks as part of their gateway licence application, and we consider this point is not pertinent to our gateway licensing decision.<sup>18</sup>
- 3.35 Viasat has also not explained why Kuiper's use of absolute unavailability criteria in its analysis would result in coexistence issues for other NGSO systems, which is the subject of our assessment in this document. <sup>19</sup> Further, no other stakeholder has raised concerns about Kuiper's use of this methodology for assessing coexistence with other NGSO systems, nor in relation to past NGSO licence applications we have assessed.
- 3.36 As with throughput degradation, the methodology for assessing NGSO interference using an unavailability degradation metric is the subject of ongoing work and discussion by other administrations and in international fora (e.g. ITU WP4A). For the reasons set out in paragraph 3.30, we do not consider it proportionate to carry out our own independent assessment of absolute unavailability criteria at this time. Rather, we will continue to participate in and monitor international discussions on this topic, and consider the application of future international decisions to our NGSO licensing process as appropriate.
- 3.37 We therefore remain satisfied that the evidence Kuiper have provided in relation to unavailability degradation is sufficient to demonstrate the impact of its NGSO gateway on other existing NGSO licensees is minimal.

<sup>&</sup>lt;sup>17</sup> Kuiper's full response is published alongside this statement.

<sup>&</sup>lt;sup>18</sup> For Kuiper's NGSO system, our view on its ability to coexist with GSO networks is set out in our February 2025 statement. We also respond to some of Viasat's concerns about impacts on GSO networks in Section 5. <sup>19</sup> Viasat's response refers to the methodology in Resolution 770 and No. 22.5L. However these documents relate to protecting GSO networks, rather than NGSO to NGSO coexistence, which is the focus of Kuiper's coexistence analysis under our NGSO licensing process. It is not therefore clear how these documents are establishing ITU standards for coexistence methodology as Viasat suggests.

<sup>&</sup>lt;sup>20</sup> The FCC recently introduced new spectrum sharing rules for NGSO fixed satellite service (FSS) systems and in it adopted an absolute increase in link unavailability as the sole short term interference metric. In its decision the FCC noted its view that this metric "provides a more reliable measure of short-term interference that is not as susceptible to significant fluctuations as a relative increase metric would be".

#### Coexistence with future NGSO systems

- 3.38 Our process for considering NGSO gateway licence applications recognises that it is not possible for an applicant to know the future plans of other operators. An applicant's proposed approach to coexistence cannot therefore be detailed and specific at this stage.
- 3.39 In summary, we request applicants to set out clear principles for appropriately mitigating interference issues, to demonstrate that their system (including any gateways) has the flexibility to accommodate new entrants, if required. This will ensure they can meet the terms of their licence if and when additional NGSO operators apply to operate services in the UK. We therefore require applicants to:
  - explain how their existing network design and operating model might facilitate coexistence with future NGSO systems, as well as any limitations;
  - outline any additional measures for improving coexistence with future NGSO systems and their expected benefits; and
  - take reasonable measures to accommodate future NGSO systems, in order to avoid material
    degradation to services in the UK, as well as specifying the measures future NGSO systems
    could reasonably be expected to put in place to coexist with NGSO terminals and/or
    gateways.
- 3.40 Kuiper described in its application how it could coordinate with any future NGSO system. To demonstrate how it will achieve compatibility, Kuiper explained it has designed its NGSO system with a number of flexible techniques, including:
  - sophisticated frequency and beam planning algorithms;
  - adaptive coding and modulation techniques; and
  - use of redundant communication paths for unforeseen outages or interference.
- 3.41 Kuiper also noted that its NGSO system uses narrow beamwidths to ensure that energy transmitted is only received in areas near the intended receiver. As a result, other unintended receivers observe significantly reduced levels of interference, allowing other NGSO systems to use co-frequency spectrum in the same locations. Further, Kuiper's planning software has been designed so that it can target specific areas to implement:
  - frequency stay-out zones;<sup>21</sup>
  - satellite avoidance angles; or
  - power reductions.

3.42 After reviewing the information submitted by Kuiper, we set out our initial view in the Kuiper gateway consultation that the techniques described for flexibly accommodating new entrants should be sufficient to ensure its NGSO gateway will be capable of coexisting with future NGSO systems (including gateways and terminal operators).

<sup>&</sup>lt;sup>21</sup> We understand Kuiper's frequency stay out zones refer to its capability to impose frequency constraints at a planning cell level of resolution, and could be created in a localised area (over a selected number of planning cells) to avoid potential interference in specific frequency channels. Kuiper also stated it will have geofencing capabilities to restrict the availability of service offerings to terminals based on their reported position.

3.43 We asked the following question to gather input from stakeholders:

#### **Consultation question 2**

Are the measures set out by the applicant to enable coexistence with future NGSO systems reasonable?

#### **Consultation responses**

3.44 We received one non-confidential response to question 2 from Viasat, which simply referenced its response to question 1 regarding coexistence with existing NGSO systems. These have been summarised and addressed in our assessment of question 1 responses above (see paragraphs 3.21-3.37).

#### **Our assessment**

3.45 We continue to consider that the techniques described by Kuiper in its application for flexibly accommodating new entrants should be sufficient to ensure its NGSO gateway will be capable of coexisting with future NGSO systems (including gateways and terminal operators).

#### Conclusion on NGSO coexistence

- 3.46 Having reviewed Kuiper's approach to coexistence set out in the annex to its NGSO gateway licence application, its response to our request for clarification and taking account of consultation responses, we maintain our view that Kuiper has provided the necessary evidence to show that its NGSO gateway should be capable of coexisting with current and future NGSO systems and gateway earth stations in the Ka band in the UK. We assess that Kuiper intends to cooperate with other NGSO licensees and that its NGSO gateway has the flexibility to mitigate harmful interference to other NGSO systems (and gateways). We are also satisfied that the existing conditions in NGSO licences provide us with the necessary powers to intervene to resolve harmful interference if required, and that granting the NGSO gateway licence is unlikely to degrade consumer services.
- 3.47 We encourage licensees to engage in ITU coordination discussions in good faith to ensure coexistence with other NGSO licensees. We will be monitoring the progress of these coordination discussions, as we do for all our NGSO licensees.

# 4. Assessing the impact on competition

4.1 Our NGSO licensing process explains that our starting position for assessing competition is to authorise applications where possible. This reflects the extent of the likely risks to competition, and our view that, because the NGSO industry is still emerging and characterised by uncertainty, the benefits of enabling systems are in general likely to exceed the risks.

#### **Risks to competition**

- 4.2 In the Kuiper gateway consultation we identified five potential risks to competition that could be relevant to our assessment of Kuiper's application for an NGSO gateway licence. These concerns relate to scarcity, i.e. the availability of gateway sites to future applicants, and coexistence with other NGSO operators. If realised, these concerns could lead to weakened competition and worse outcomes for consumers, such as higher prices or lower quality of services. We also noted that some of the key competition risks in the satellite sector are global in nature and are not necessarily affected by our gateway licensing decisions. The five risks we identified in the consultation were:<sup>22</sup>
  - **Potential risk 1**: Occupying all or most of the available NGSO gateway sites, or occupying preferential sites, raising the cost of entry to subsequent entrants.
  - Potential risk 2: Requiring large separation distances between its NGSO gateway(s) and gateways or user terminals of other operators, thereby sterilising areas for existing and future rivals.
  - **Potential risk 3**: Applying for NGSO gateway licences at sites which it does not plan to develop to deliberately block future entrants.
  - Potential risk 4: Gateways creating harmful interference into existing NGSO gateways and/or other user terminals, resulting in weakened competition and worse outcomes for consumers.
  - Potential risk 5: Gateways being unable to coexist with future NGSO systems (including
    gateways and user terminals), creating a barrier to entry and in turn restricting competition.
- 4.3 In the consultation, we set out our initial view on these five potential risks. We concluded that those risks were unlikely to materialise for the following reasons:

<sup>&</sup>lt;sup>22</sup> As noted in our February 2025 statement (see paragraph 5.18), Kuiper is a separate entity to Blue Origin Enterprises, L.P. (Blue Origin) – an aerospace manufacturer and spaceflight services company, which is active in rocket launches. This means that these two companies are not vertically integrated. Therefore, in the consultation we did not examine vertical theories of harm, such as input foreclosure. Even if the two firms were vertically integrated, Blue Origin does not yet have a significant presence in the satellite launch market, which explains our decision not to consider this theory of harm at this stage.

- **Potential risk 1:** because the application was for a single gateway and there are alternative, comparable sites for other satellite operators to develop, should they wish.
- Potential risk 2: because the coexistence analysis provided by Kuiper indicated that, even
  when its gateway is co-located with other operator's gateways and/or user terminals, the
  decreased availability and reduction in throughput for existing licensees would be modest.
- Potential risk 3: because Kuiper had applied for only one gateway site in Cornwall.
- Potential risk 4: because Kuiper's proposed NGSO gateway is capable of coexisting with other co-frequency NGSO systems and gateway earth stations.
- Potential risk 5: because the techniques for flexibly accommodating new entrants described in Kuiper's NGSO gateway application should be sufficient to ensure its NGSO gateway would be capable of coexisting with future NGSO systems (including gateways and user terminals).
- 4.4 Overall, our initial view was that there would not be a material risk to competition.

#### **Benefits**

- 4.5 In the Kuiper gateway consultation, our preliminary view was that granting this licence would support Kuiper's plans to offer high speed, low latency broadband services, including potentially connecting customers in some harder to reach locations in the UK. We also expected that granting this licence would have the potential to enhance competition in the provision of retail satellite broadband services delivered directly to consumers, where currently there is only one NGSO provider in the UK.
- 4.6 We asked stakeholders the following question in the Kuiper gateway consultation:

#### **Consultation question 3**

Do you expect that granting this NGSO gateway licence would benefit or harm competition between NGSO services in the UK? Please provide details.

#### **Consultation responses**

- 4.7 We received two non-confidential responses to question 3, one from Viasat and one from a respondent who wished to remain anonymous.
- 4.8 We did not receive any responses to our consultation on potential risks 1 to 5 or the benefits of granting this licence. Therefore, our view on those risks, and the benefits of granting this licence, are unchanged.
- 4.9 We assessed Kuiper's NGSO system which represents market entry as a whole in our <u>February 2025 statement</u>, where we concluded that granting the licence will not create a material risk to competition, and that the services would benefit UK consumers, customers, and citizens.
- 4.10 Most issues raised by stakeholders in response to question 3, including those identified by the anonymous respondent, relate to Kuiper's NGSO system as a whole rather than this specific gateway application. These are not pertinent to this specific licensing decision given our published approach. However, we have taken account of these responses in our

- reasoning as relevant to the impact the application might have in the round, and address the responses below for completeness.
- 4.11 **Risk of monopolisation of the market and impact on pricing:** The anonymous respondent said that granting this licence would allow Kuiper to "act as a monopoly in any and all markets in which it serves".
- 4.12 **Risk of coordinated behaviour:** The anonymous respondent said that granting this licence would enable "a de facto cartel between e.g. Starlink and Kuiper to keep prices artificially high".
- 4.13 **Risk of cumulative impact of multiple NGSO systems:** The anonymous respondent noted the presence of other NGSO gateways in the UK, and suggested that the cumulative spectrum, physical, and regulatory impact of rapidly multiplying NGSO systems needs to be examined to avoid longer term issues of congestion, sustainability and regulatory arbitrage.
- 4.14 Competition risks of not establishing a methodology for sharing EPFD budget: Viasat said that granting this NGSO licence to Kuiper without any process or methodology to share the aggregate EPFD budget<sup>23</sup> among multiple NGSO systems "would cause significant uncertainty, chill investments in existing and future NGSO systems and harm competition".
- 4.15 **Government funding of terrestrial infrastructure:** The anonymous respondent queried whether having a private company providing satellite broadband service may disincentivise central government from further funding expansion of existing ground-based infrastructure to reach remote and/or poorly served areas.

#### **Our assessment**

- 4.16 **Risk of monopolisation of the market and impact on pricing:** Starlink is the only current provider of retail satellite broadband services delivered directly to consumers in the UK. Therefore, our view is that Kuiper's entry and expected expansion supported by a UK gateway potentially represents more choice and connectivity options for consumers compared to the counterfactual of just one provider. We would generally expect more competition in a market to lead to lower prices and/or higher quality of service for consumers and businesses.
- 4.17 **Risk of coordinated behaviour:** With regards to the consultation response on possible collusion between two or more operators, Kuiper has not yet commenced services in the UK and so any concerns would have to be forward-looking. As noted above, the industry is currently characterised by demand uncertainty and expanding capacity. These are two features of the market which are not typically conducive to coordinated behaviour.
- 4.18 **Risk of cumulative impact of multiple NGSO systems:** With NGSO systems using shared spectrum bands, and the number of NGSO systems (and gateways) continuing to grow, we recognise that satellite spectrum bands are likely to become more congested. This is why our NGSO licensing process checks each applicant's ability to coordinate and coexist with others, and that it can flexibly accommodate future entrants. We explained in our <a href="NGSO licensing review consultation">NGSO licensing review consultation</a> that the interference environment could become more

<sup>&</sup>lt;sup>23</sup> Aggregate EPFD (equivalent power flux density) limits are regulations that set the maximum combined interference from multiple NGSO systems into GSO satellite networks.

- complex over time, so we expect to continue to monitor the situation as the market evolves and may revise our approach in future.
- 4.19 Competition risks of not establishing a methodology for sharing EPFD budget: We recognise that the lack of agreed methodology to share the aggregate EPFD budget amongst multiple NGSO systems may result in uncertainty for NGSO systems and other operators sharing these frequencies. We note that the ITU's process for developing such methodology (under Resolution 76) is underway and set out our views on this wider issue in paragraph 5.17). Accordingly, we do not consider it proportionate to develop our own methodology at this stage.
- 4.20 **Government funding of terrestrial infrastructure:** Our view is that it is for Government to decide its broadband infrastructure investments. While such funding will extend coverage of full fibre beyond the commercial rollouts, other technologies such as fixed wireless access (FWA) or satellite are likely to play a role in addressing the needs of the hardest-to-reach areas.

#### **Conclusion on competition**

4.21 For the reasons set out above, we remain of the view that the competition risks from approving Kuiper's application for an NGSO gateway licence are low. In addition, we consider that granting Kuiper a licence to operate this NGSO gateway site would benefit UK customers, consumers and citizens.

### 5. Additional comments

#### Additional comments

We gave respondents the opportunity to offer any other comments they may have in relation to Kuiper's NGSO gateway licence application, and asked:

#### **Consultation question 4**

Do you have any additional concerns or comments regarding the application?

#### **Consultation responses**

5.2 We received three non-confidential responses and one confidential response to question 4. The non-confidential responses were from Viasat and two respondents who wished to remain anonymous. The confidential respondent agreed that the points it made about Kuiper's NGSO gateway licence application could be made public.

#### **Demonstrating compliance with Article 22**

- 5.3 The confidential respondent and Viasat queried whether Kuiper had sufficiently demonstrated how it complies with Article 22 of the ITU Radio Regulations as required under the NGSO licensing process. Both respondents noted that Kuiper's three filings (USASAT-NGSO-8A, USASAT-NGSO-8B, USASAT-NGSO-8C) have been evaluated by the ITU for EPFD compliance with Article 22 individually and given a favourable finding.
- 5.4 However, Viasat considered that these individual findings provide little insight into whether Kuiper's Gen 1 satellites comply with applicable EPFD limits (under Article 22) when considered as a single system. It provided analysis showing that when the EPFD levels of the three satellite filings are combined, the EPFD levels are exceeded which results in significantly higher levels of interference into GSO networks. It said this demonstrated that there were limitations and gaps in relying solely on ITU processes, and it therefore encouraged us to independently assess the potential for interference from a single NGSO system and all NGSO systems collectively.<sup>24</sup>
- In addition, the confidential respondent queried whether Kuiper's newer satellite filings have received a favourable finding by the ITU Radiocommunication Bureau (ITU-BR). It suggested that Kuiper provide reassurance and/or a technical explanation that the new NGSO gateway, and the increase in capacity it would enable, would not prevent Kuiper from complying with Article 22.

#### Managing aggregate interference into GSO networks

5.6 The confidential respondent welcomed our intention to represent the views of GSO licensees during the ITU consultation meetings to be set up under Resolution 76, as set out in the Kuiper NGSO network licence decision.

<sup>&</sup>lt;sup>24</sup> Viasat suggested a range of measures an assessment of compliance with the single-entry and aggregate EPFD limits prescribed in Article 22 and Resolution 76 might include on page 7 of its response.

5.7 Viasat observed that SpaceX and Kuiper together would consume almost the entire NGSO EPFD long-term interference budget, which already limits the opportunities for other NGSO systems to operate within this budget.<sup>25</sup>

#### New licence conditions for meeting Article 22 obligations

- 5.8 Viasat suggested new licence conditions were necessary to ensure that Kuiper's operations did not exceed the Article 22 interference limits when looking at the NGSO system as a whole. It proposed the following requirements:
  - for Kuiper to operate its NGSO system as a single constellation for the purposes of EPFD limits, no matter how many ITU filings it operates under;
  - for Kuiper to confirm its deployed NGSO system is fully consistent with, and complies with all
    parameters in its ITU filings, including the maximum number of co-frequency beams serving
    a specific location in the UK (Nco), the minimum GSO arc avoidance angle (alpha angle), and
    the downlink power flux density (PFD) mask.<sup>26</sup>

#### Suitability to hold an NGSO licence in the UK

5.9 The first anonymous respondent raised concerns about Kuiper's suitability to hold an NGSO gateway licence in the UK. They expressed concerns about digital sovereignty, data jurisdiction and national security, noting the strategic importance of gateways and the risks of ceding operational control over UK data traffic to a foreign owned (and regulated) company. They urged us to reject Kuiper's application or, at a minimum, pause the decision until a more rigorous public interest and strategic impact review is conducted.

#### Interference to radio astronomy

5.10 The second anonymous respondent raised concerns about Kuiper's NGSO gateway causing interference to the visible and radio spectrum for astronomers.

#### Our assessment

- As explained in paragraphs 3.21-3.23, our assessment in this document considers whether Kuiper's NGSO gateway is able to coexist with (and the competitive impact on) other NGSO licensees in the UK. NGSO gateways applicants are not required to demonstrate coexistence of their NGSO system as a whole, including with other services like GSO networks, as this is typically assessed as part of their NGSO network licence application. We assessed Kuiper's NGSO system as a whole in our <a href="February 2025 statement">February 2025 statement</a>.
- 5.12 Some of the additional comments raised in response to question 5 relate to Kuiper's NGSO system as a whole rather than this specific gateway application. These are not pertinent to this specific licensing decision given our published approach. However, we have taken account of these responses in our reasoning as relevant to the impact the application might have in the round, and address the responses below for completeness.

#### **Demonstrating compliance with Article 22**

<sup>&</sup>lt;sup>25</sup> Viasat additionally noted that SpaceX's two NGSO systems already "appear to exceed the existing single-entry (i.e., per-system) EPFD limits by significant amounts".

<sup>&</sup>lt;sup>26</sup> Viasat further suggests PFD masks should take into account the actual characteristics of NGSO systems and earth stations as deployed including the radiation pattern of its satellite antenna.

- 5.13 To address the concerns raised, we requested further clarification from Kuiper about the satellite filings which this gateway will operate under. <sup>27</sup> Kuiper explained that the FCC had submitted a modification on Kuiper's behalf for the <u>USASAT-NGSO-8A</u>, <u>USASAT-NGSO-8B</u> and <u>USASAT-NGSO-8C</u> satellite filings (submitted on 15, 22 and 26 February 2024 respectively), together with a request to perform a combined examination for these modified filings to the ITU-BR. It noted that these requests are still in 'as received' status and have not yet been published.
- 5.14 As the FCC has already submitted a request to the ITU for a combined assessment of Kuiper's filings, we do not consider it reasonable or proportionate to carry out our own assessment at this time. As explained previously in section 3, our NGSO licensing process is intended to reinforce ITU processes and does not seek to replace or replicate them. Further and more generally, we are satisfied that the ITU processes we have outlined in this section are sufficient for assessing compliance with Article 22 and we therefore do not consider it proportionate to independently assess the potential for interference from a single NGSO system and/or all NGSO systems collectively.
- 5.15 In addition, we noted in footnote 2 of the Kuiper gateway consultation that Kuiper's Gen 2 NGSO system would operate under three newer satellite filing references but that none of these filings are in use with this application for an NGSO gateway licence. In its response to our request for further clarification, Kuiper confirmed that its newer satellite filings represent different options for their Gen 2 system, and that the NGSO gateway it is applying for now will not communicate with its Gen 2 system. It plans to submit a new NGSO gateway application for the Gen 2 system once its design has been finalised. We therefore do not consider the ITU's assessment of the newer filings to be relevant to this NGSO gateway licence application.

#### Managing aggregate interference into GSO networks

- 5.16 We note the confidential respondent's position on representation in Resolution 76 meetings.
- 5.17 We responded to the issue of sharing EPFD link budgets in paragraphs 4.15-4.18 of our February 2025 statement. We agree it is important that a methodology to assess aggregate interference is developed as a priority; the ITU's process for doing so (under Resolution 76) is already being developed in ITU WP4A as a matter of urgency, and we are part of those ongoing discussions. However, we do not consider it necessary to constrain NGSO licensing in the short term given limited NGSO deployment in Ka band to date, and all notifying administrations will face the same implementation issue once a solution is agreed.

#### New licence conditions for meeting Article 22 obligations

- 5.18 Viasat proposed that we should insert additional licence conditions into the NGSO gateway licence to ensure that the Kuiper system operations did not exceed the Article 22 interference limits.
- 5.19 We do not think this would be proportionate given protecting GSO satellites is already a condition of the NGSO network licence which Kuiper holds condition 3.7(p) requires licensees to comply with the relevant EPFD limits specified in Article 22. Should harmful interference occur, condition 8.3 of our NGSO network licence and condition 5.3 of our

<sup>&</sup>lt;sup>27</sup> Kuiper's full response is published alongside this statement.

- NGSO gateway licence, gives us the power to require licensees to cease or change the way the licensee operates.
- 5.20 Further, as noted in paragraph 3.27, the responsibility for ensuring that satellite operators comply with their ITU obligations, including managing coexistence between satellite filings, ultimately rests with the notifying administration responsible for the NGSO system. For Kuiper this is the FCC.

#### Suitability to hold an NGSO licence in the UK

- 5.21 We set out how we make decisions on NGSO spectrum licence applications in our <u>NGSO</u> <u>guidance</u>. This is focused on potential coexistence and competition impacts and does not take account of factors such as data sovereignty and national security.
- 5.22 National security policy is set by government, and the Secretary of State has power to direct us in the interests of national security under Section 5 of the Communications Act. We also note that we have powers to revoke licences on national security grounds, where appropriate.<sup>28</sup>

#### Interference to radio astronomy

- 5.23 We do not have responsibility for managing the electromagnetic spectrum frequencies relating to visible light.
- 5.24 Our NGSO licensing process requires applicants for NGSO network licences to demonstrate how they will avoid causing interference to radio astronomy (in co-frequency and adjacent bands). In Kuiper's NGSO network licence application it stated that its NGSO system and proposed gateway will operate in the Ka band so would not operate in frequency bands that are allocated, or adjacent, to the radio astronomy service. This means Kuiper's NGSO gateway would be able to coexist with UK radio astronomy services without any risk of harmful interference.

#### Conclusion

5.25 Having assessed stakeholders' additional comments, we are satisfied that no additional comments have been raised which lead us to alter our decision to grant Kuiper's NGSO gateway licence.

#### **Equality and Welsh language impact assessments**

- 5.26 We also assessed the likely impacts and benefits of granting Kuiper's NGSO gateway licence on persons sharing protected characteristics, and on the Welsh language, as set out in annex 1 of the Kuiper gateway consultation and this statement. We have not identified any adverse impacts on persons sharing protected characteristics that mean they are likely to be affected in a different way to the general population, nor did we consider that our proposals have any negative impact on our Welsh language obligations.
- 5.27 We also consider that our proposal to grant Kuiper's NGSO gateway licence would support Kuiper's plans to provide broadband and backhaul connectivity via satellite. This is likely to have positive impacts on households, businesses and other customers in the UK, including

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<sup>&</sup>lt;sup>28</sup> Wireless Telegraphy Act 2006, Schedule 1, par. 8(5)(a).

in some harder to reach areas, which would help to improve equality of opportunity in those areas where connectivity would be provided (Kuiper expects more than 75% of its customers to be located outside the southeast of England, including in Wales, Scotland and Northern Ireland). It also has the potential to support increased connectivity in Wales which may provide more opportunities to use the Welsh language.

5.28 We asked stakeholders the following questions:

#### **Consultation question 5**

Do you agree with our assessment of the potential impact of our proposal on specific groups of persons?

#### **Consultation question 6**

Do you agree with our assessment of the potential impact of our proposal on the Welsh language?

#### **Consultation responses**

5.29 Two respondents commented on these questions. Viasat said that it had not formulated a view on questions 5 and 6 at this point in time. The first anonymous respondent disagreed with our assessment of question 5 relating to the potential equality impact on specific groups of persons, though provided no further explanation and simply referred back to their response to previous questions.

#### **Our assessment**

- 5.30 We have addressed the points raised by the first anonymous respondent in previous sections. No respondent raised specific issues regarding our assessments of the potential impacts of our proposals on specific groups of persons or on the Welsh language.
- 5.31 We therefore remain of the view that granting this NGSO gateway licence will not have any adverse impact on persons sharing protected characteristics, reduce opportunities for persons to use the Welsh language, nor does it treat the Welsh language any less favourably than the English Language. Our full reasoning is set out in annex 1 of this statement.

## 6. Our decision

# How we decide whether to grant an NGSO gateway licence

- 6.1 Our <u>2021 NGSO statement</u> explains the considerations we would take into account when deciding whether to grant an NGSO licence:
  - a) our technical coexistence checks;
  - b) our competition check;
  - a) our impact assessments;<sup>29</sup>
  - c) our statutory duties, as set out in section 3 of the Wireless Telegraphy Act 2006 and section 3 of the Communications Act 2003, with our principal duty being to further the interests of citizens and consumers in relation to communications matters, where appropriate by promoting competition;
  - d) our NGSO licensing objectives, including to enable citizen and consumer benefits arising from innovative satellite services, such as improved connectivity; and
  - e) any other available relevant evidence, including the application, consultation responses and any further information provided by the applicant.
- 6.2 In exercising our regulatory functions, we are also required to have regard to the desirability of promoting economic growth.<sup>30</sup>

#### Our decision and next steps

- 6.3 In light of the evidence presented in Kuiper's NGSO licence application, further clarifications, and our careful consideration of potential coexistence and competition issues, impact assessments and consultation responses, we have decided to grant Kuiper an NGSO gateway licence to connect to its NGSO system in the Ka band in the UK.
- 6.4 We will now proceed to issue Kuiper its NGSO gateway licence to operate in Ka band frequencies 27.5-27.9405 GHz, 28.4545-28.9485 GHz and 29.4525-30 GHz, subject to payment of the licence fee. A copy of the NGSO gateway licence will also be made available under the "Existing licences" section of our NGSO licensing webpage.

<sup>&</sup>lt;sup>29</sup> See annex 1 for full details of the impact assessments carried out.

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<sup>&</sup>lt;sup>30</sup> Section 110(3) of the Deregulation Act 2015 requires us to have regard to the <u>Growth Duty: Statutory Guidance</u> (revised by the Government in May 2024).

# A1. Impact assessments

#### Impact assessment

- A1.1 Section 7 of the Communications Act 2003 (the Act) requires us to carry out and publish an assessment of the likely impact of implementing a proposal which would be likely to have a significant impact on businesses or the general public, or when there is a major change in Ofcom's activities.
- A1.2 Impact assessments form part of good policy making and we therefore expect to carry them out in relation to a large majority of our proposals. We use impact assessments to help us understand and assess the potential impact of our policy decisions before we make them. They also help us explain the policy decisions we have decided to take and why we consider those decisions best fulfil our applicable duties and objectives in the least intrusive way. Our impact assessment guidance sets out our general approach to how we assess and present the impact of our proposed decisions and section 4 of our 2021 NGSO statement sets out how we assess the impact of applications for NGSO gateway licences.
- A1.3 We have carefully considered the potential impact of granting an NGSO gateway licence to Kuiper throughout the consultation and decision-making process. We assessed the benefits of Kuiper's application for an NGSO gateway licence on citizens and consumers, as well as the risks posed to coexistence with other NGSO systems and competition in sections 3 and 4 of the Kuiper gateway consultation. We set out our assessment and final decision in sections 3-6 of this statement, considering Kuiper's NGSO gateway licence application, additional information from Kuiper, and comments we received in response to our Kuiper gateway consultation.
- A1.4 For the reasons given in sections 3-6 of this document, our overall view is that the expected benefits of authorising this gateway licence are likely to outweigh the costs and risks. We consider that granting the licence request would allow Kuiper to provide an improved service to citizens and consumers, and meet growing demand, with any risks to competition or coexistence limited by the proposed mitigations.
- A1.5 In particular, we have concluded that our decision to grant an NGSO gateway licence is likely to generate benefits, by supporting Kuiper to provide improved satellite connectivity to enterprises and government organisations and supporting backhaul services across the UK. In addition, we consider that our decision is unlikely to have a detrimental impact on stakeholders, and that there is a low risk of the decision harming competition. We also consider that Kuiper is unlikely to cause harmful interference to other services in the frequencies it intends to use. Further, our NGSO licence conditions are designed to achieve coordination in good faith, and we are able use our enforcement powers to remedy issues that may arise.

#### **Equality impact assessment**

A1.6 We have given careful consideration to whether our decision will have a particular impact on persons sharing protected characteristics (broadly including race, age, disability, sex, sexual orientation, gender reassignment, pregnancy and maternity, marriage and civil

partnership, and religion or belief in the UK, and also dependents and political opinion in Northern Ireland), and in particular if they may discriminate against such persons or impact on equality of opportunity or good relations. This assessment helps us comply with our duties under the Equality Act 2010 and the Northern Ireland Act 1998.

- A1.7 When thinking about equality we think more broadly than persons that share protected characteristics identified in equalities legislation and think about potential impacts on various groups of persons (see paragraph 4.7 of our impact assessment guidance).
- A1.8 In particular, section 3(4) of the Act requires us to have regard to the needs and interests of specific groups of persons when performing our duties, as appear to us to be relevant in the circumstances. These include:
  - the vulnerability of children and of others whose circumstances appear to us to put them in need of special protection;
  - the needs of persons with disabilities, older persons and persons on low incomes; and
  - the different interests of persons in the different parts of the UK, of the different ethnic communities within the UK and of persons living in rural and in urban areas.
- A1.9 We also examine the potential impact our policy is likely to have on people, depending on their personal circumstances. This assists us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers, regardless of their background and identity.
- A1.10 Kuiper intends to establish an NGSO gateway earth station in Bude, Cornwall to support its plans to provide high speed, low latency wireless broadband services from satellites to households and businesses, as well as backhaul connectivity to telecommunications carriers using Ka band in the UK (details can be found in annex 1 to Kuiper's NGSO gateway licence application).
- A1.11 We have assessed the impacts and benefits of granting Kuiper's NGSO gateway licence on specific groups of persons, including those sharing protected characteristics. Taking account of stakeholder responses, we can confirm our view set out in the Kuiper gateway consultation that our decision to grant Kuiper an NGSO gateway licence is likely to have positive impacts on households, businesses and other customers in the UK. This includes supporting Kuiper to improve connectivity in more rural and remote areas of the UK; Kuiper expects more than 75% of its customers to be located outside the southeast of England, including in Wales, Scotland and Northern Ireland, which will help to improve equality of opportunity in those areas. We have not identified any adverse impacts on specific groups of persons, including those sharing protected characteristics, that are likely to be affected in a different way to the general population through the granting of this NGSO gateway licence.

<sup>&</sup>lt;sup>31</sup> As explained in footnote 4, Kuiper's Gen1 NGSO system will only extend to 56 degrees latitude north.

#### Welsh language impact assessment

- A1.12 We are required to take Welsh language considerations into account when formulating, reviewing, or revising policies which are relevant to Wales (including proposals which are not targeted at Wales specifically but are of interest across the UK). 32
- A1.13 Where the Welsh Language Standards are engaged, we consider the potential impact of a policy proposal on (i) opportunities for persons to use the Welsh language; and (ii) treating the Welsh language no less favourably than the English language. We also consider how a proposal could be formulated to have or to increase a positive impact, or not to have or to decrease any adverse effects.
- A1.14 We consider our decision to grant Kuiper an NGSO gateway licence will not have any negative impacts on our Welsh language obligations, as it relates to a nationwide licensing regime and the relevant licence products are available for anyone within the UK to apply. We consider our decision also has the potential to support increased connectivity in Wales, which may provide more opportunities to use the Welsh language.
- A1.15 We will continue to produce spectrum licences, including NGSO licences, in Welsh when requested, in accordance with our obligations set by the Welsh Language Commissioner.

<sup>&</sup>lt;sup>32</sup> See Standards 84-89 of <u>Hysbysiad cydymffurfio</u> (in Welsh) and <u>compliance notice</u> (in English). Section 7 of the Welsh Language Commissioner's <u>Good Practice Advice Document</u> provides further advice and information on how bodies must comply with the Welsh Language Standards.