

NSLComm Ltd "BeetleSat": application for non-geostationary earth station network licence

Request for comments

Consultation

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1. Overview

- 1.1 Non-geostationary orbiting (NGSO) satellite systems are a new way of delivering broadband services from space using a constellation of satellites in a low or medium Earth orbit. These satellite systems have the potential to deliver higher speeds and lower latency services.
- 1.2 As set out in our statement on <u>non-geostationary satellite systems</u>, we have a process for considering applications for the following types of spectrum licence:
 - Satellite (Earth Station Network): this licence authorises an unlimited number of
 user terminals to connect to the NGSO system (subject to certain conditions). It
 also places certain conditions on the licence holder (typically a satellite operator)
 to coordinate with other licence-holders. We refer to this licence as a "NGSO
 network licence".
 - Satellite (Non-Geostationary Earth Station): this licence authorises gateway earth stations, which connect the NGSO system to the internet or to a private network. We refer to this licence as a "NGSO gateway licence".
- 1.3 Ofcom has received an application from NSLComm Ltd ("NSLComm") for a NGSO network licence for their NGSO system "BeetleSat". This application seeks authorisation to operate user terminals in the UK. We have not received an application from BeetleSat to operate any UK gateways to date. Details of this application (reference: "BEETLESAT-NET-1") can be found under the "Applications received" section of our website.
- 1.4 When considering applications for these licences, amongst other considerations, we take account of their impact on technical coexistence and competition on existing and future NGSO systems. We also publish and invite comments on applications that we are considering authorising. Further information about the process and how to respond to licence applications can be found in our non-geostationary satellite earth stations licence guidance.
- 1.5 The BeetleSat system will use Ka band for terminals and gateways. NSLComm has applied to use the frequencies 27.5 27.8185 GHz, 28.4545 28.8265 GHz and 29.5 30 GHz.
- 1.6 At the time of writing, four satellite operators already hold NGSO network licences see Table 1. These licences permit use in both the Ku band (14.0 14.5 GHz) and Ka band (27.5 27.8185 GHz, 28.4545 28.8265 GHz and 29.4625 30 GHz); we have indicated which of these frequency bands the operators plan to use for terminals connecting to their constellations.
- 1.7 Alongside the list of existing licensees, Rivada GmbH applied for an Earth Station Network application on 25 August 2023 see Table 2. We published a consultation for Rivada's application on 19 October 2023 with the closing date for responses on 16 November 2023. We are currently considering those responses before we publish a statement with our decision on Rivada's application.
- 1.8 Finally, SpaceX is also currently licensed to operate seven NGSO gateways in the UK which connect to the Starlink constellation see Table 3. These gateways all operate in the Ka band. Some of the licences for these gateways are held by teleport/site operators rather than Starlink itself.
- 1.9 Details of these licences can also be found on the NGSO page of our website.

Table 1: Existing NGSO Earth Station Network licence holders and Terminal Frequency Band.

NGSO Network licence holders	Terminal frequency band
Mangata Edge Ltd	Ka band
Telesat LEO Inc	Ka band
Starlink Internet Services Limited (a subsidiary of SpaceX)	Ku band
Network Access Associates Ltd (a subsidiary of OneWeb)	Ku band

Table 2: Pending NGSO Earth Station Network licence applications

Pending NGSO Network licence applications	Terminal frequency band
Rivada Space Networks GmbH	Ka band

Table 3: Existing NGSO Gateway licence holders and frequency bands.

NGSO Gateway licence holders	Location	Gateway frequency band
Starlink Internet Services Limited	Fawley	Ka band
Starlink Internet Services Limited	Morn Hill	Ka band
Starlink Internet Services Limited	Wherstead	Ka band
Starlink Internet Services Limited	Woodwalton	Ka band
Arqiva Ltd	Chalfont	Ka band
Goonhilly Earth Station Limited	Goonhilly	Ka band
Starlink Internet Services UK Limited	Isle of Man	Ka band

1.10 We are publishing this document to invite comments on NSLComm's application and to set out our preliminary views. When deciding whether to grant this application, we will take into account all comments received and we are open to changing our preliminary views depending on responses and evidence submitted to us as part of this process. The deadline for comments is 5pm on 19 February 2024

What we are proposing – in brief

This document sets out Ofcom's proposal to grant a NGSO network licence to NSLComm Ltd for the BeetleSat constellation. Details of the application (reference: BEETLESAT-NET-1) can be found under the "Applications received" section of our website.

We invite comments on our proposal by 29 February 2024.

We will consider any responses to this consultation before taking a final decision on whether to grant a licence to NSLComm Ltd.

The overview section in this document is a simplified high-level summary only. The proposals we are consulting on and our reasoning are set out in the full document.

2. Assessment of application

2.1 In this section we consider the coexistence and competition aspects of the licence application including the impact of granting the licence. We outline relevant parts of the application and indicate where we would value input from stakeholders. We encourage stakeholders to read the full application.

Description of system

- 2.2 The BeetleSat constellation will comprise 264 satellites operating at 720km altitude and along 12 orbital planes, each comprising 22 satellites. NSLComm launched a test satellite in January 2023. They anticipate that the initial batch of satellites for the operational system will be launched in the second half of 2026.
- 2.3 NSLComm explain that the Beetlesat network is designed to offer connectivity services to both verticals and end user applications, including aviation, maritime, military SatCom, enterprise and backhaul applications for terrestrial telecommunications networks. They state that the system will deliver up to 2Tbps total network capacity.
- 2.4 Further details outlining the characteristics of this constellation can be found in the Annex of their application.

Assessing the impact on coexistence

- 2.5 When issuing NGSO spectrum licences, one of Ofcom's objectives is that all authorised systems are capable of coexisting (in frequency bands they are using in common), such that they are all able to provide services to their users without experiencing harmful interference.
- 2.6 When applying for a licence, we ask applicants to demonstrate:
 - a) coexistence with existing satellite systems: applicants should demonstrate how coexistence is possible between their networks and:
 - i) existing NGSO systems that are already licensed in the UK;
 - ii) NGSO systems for which a licence application has been made and has been published for comment; and
 - iii) other specific co-frequency earth stations registered with the ITU.
 - b) an ability to coexist with future NGSO systems: applicants should state what flexibility their system has to achieve coexistence with future networks. This could include the measures they would be able to put in place if another network comes along in the future; it could also suggest measures future networks could reasonably be expected to put in place in order to coexist.

Coexistence with existing systems

2.7 At the time of writing, NSLComm has not reached coordination agreements with any of the operators of UK licenced systems but has outlined in its application the anticipated potential

impact of their system on the constellations of existing licence holders, as well as mitigation techniques they might adopt to avoid harmful interference. They state:

"Thanks to its power levels relatively lower than the other systems, the BeetleSat system has a minimal impact on the increase in unavailability and degradation of spectral efficiency.

The coexistence analysis studies and results demonstrate that coexistence is possible without the need for mitigation techniques."

- 2.8 More detailed information regarding the likely impact of NSLComm's system on existing licensed systems in terms of throughput and unavailability can be found in the annex of their licence application.
- 2.9 With respect to specific co-frequency earth stations registered with the ITU, NSLComm has stated the following:

"BeetleSat will operate in accordance with agreed coordination terms to protect specific co-frequency Earth stations registered under the provisions of No. 9.7B"

2.10 Based on the evidence submitted, specifically the negligible difference between the C/N and C/(N+I)¹ curves provided, our preliminary view is that the Beetlesat constellation should be able to coexist with operators of existing systems without causing undue degradation. However, we encourage all parties to continue cooperating in good faith between now and the launch of the BeetleSat constellation.

Consultation question 1:

Do you anticipate this satellite network will pose coexistence challenges to existing services?

Coexistence with future systems

- 2.11 As outlined in our statement on <u>non-geostationary satellite systems</u>, we want to enable as many NGSO systems as possible, to provide services and increase choice for people and businesses in the UK. We therefore anticipate additional applications for NGSO licences in the future to support other NGSO systems in the UK.
- 2.12 Although we do not expect applicants to foresee the characteristics or the number of any NGSO systems that may be subject to a future licence application in the UK, we require applicants to:
 - i) explain how their existing network design and operating model might facilitate coexistence with future NGSO satellite systems and any limitations;
 - ii) outline any additional measures, which would allow improved coexistence with future systems.

¹ C, N and I parameters refer to carrier, noise and interference powers. C/(N+I) and C/N ratios are used to evaluate the quality of a signal with and without interference, respectively. Where the difference between C/(N+I) and C/N is negligible, the risk of harmful interference is very low.

- 2.13 We also request applicants to be aware that they may be expected to take reasonable measures to accommodate such future systems, in order to avoid material degradation to services in the UK.
- 2.14 NSLComm proposes in its application to manage coexistence with future systems through the implementation of lookaside angle, avoidance of overlapping frequency bands and/or the use of opposite polarization to avoid in-line events. The exact procedure for avoiding inline events would be negotiated during coordination discussions. The impact of inline events can further be lessened through dynamic assignment of spectrum and the power allocated to each beam.

"Coexistence among NGSO systems essentially involves limiting the number of, or mitigating the impact of, inline events. When implementable in practice, mechanisms such as exclusion angles can be defined in coordination discussions to limit the number of in-line events, while dynamically assigning power and bandwidth can mitigate their impact. The possibility of benefitting from any of these techniques to accommodate future systems requires that a system be flexible, agile and technically advanced. The BeetleSat system meets all such requirements and details as to how to implement any of these techniques, when and where possible, will be discussed among the interested operators during coordination discussions."

- 2.15 Further information can be found in the answers to D2 and D3 of the Beetlesat application.
- 2.16 We are seeking comments on NSLComm's proposed approach to coexistence. Our initial view is that the application provides sufficient comfort that the BeetleSat system will be capable of coexisting with future NGSO gateway and terminal operators.

Consultation question 2:

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

Protection of other services

- 2.17 As outlined in our recent statement on <u>Satellite Earth Station Network Licences</u>, we now ask applicants to provide information regarding their ability to coexist with other services, specifically GSO networks, radio astronomy, and fixed links.
- 2.18 With regards to the protection of fixed links, NSLComm has stated that:

"Beetlesat hereby confirms the compliance of the system with the power flux density limits set forth in Article 21 of the ITU Radio Regulations".

- 2.19 With regards to the protection of radio astronomy, NSLComm has stated that:
 - "The Beetlesat system will not operate in Ku-band. As such the radio astronomy service operating in the bands 14.25-14.5 GHz and 10.6-10.7 GHz will be protected from any harmful interference."
- 2.20 With regards to the protection of geostationary satellite networks, NSLComm has stated that:

"Beetlesat hereby confirms the compliance of the system with the equivalent power flux density limits set forth in Article 22 of the ITU radio Regulations. For bands not subject to the provisions of Article 22, Beetlesat will operate in accordance with agreed coordination terms with other potentially affected networks."

We are interested in obtaining comments on NSLComm's plans for protection of other systems. Our initial view is that the application provides sufficient comfort that the Beetlesat system will be capable of protecting both GSO services and fixed wireless services (and will not operate in the same bands as radio astronomy services).

Consultation question 3:

Do you assess that the measures put forward will allow this satellite network to coexist with other services?

Assessing the Impact on Competition

2.21 As outlined in the approach to competition in Annex 3 of our <u>statement on NGSO licensing updates</u>:

"Our starting position with any competition check is to authorise applications, where possible. We have outlined that we take into account four factors:

- i) the extent of the likely risks to competition;
- ii) the potential benefits from granting NGSO licence applications;
- iii) ensuring that time and resources devoted to the licensing process are proportionate to the risks and benefits; and
- iv) that NGSO services are currently in their infancy".
- 2.22 We have outlined below some of the potential risks and benefits of granting this authorisation.

Risks to competition

2.23 In the same document, we explain:

"In principle competition concerns could arise from the constraints that systems operating under a network licence might impose on subsequent entrants due to the technical barriers to coexistence between systems (e.g. due to a lack of flexibility in the design of systems). If there was a limited prospect of the applicant's system and future systems being able to technically coexist, then this could form a barrier to future entry to the market. This would be a particular concern if it results in market power. However, the magnitude of this risk is currently unclear".

2.24 We set out below three potential and general risks to competition from granting a nongeostationary earth station network licence, as well as our preliminary assessment regarding the specifics of NSLComm's application.

Potential risk 1: User terminals create interference concerns for existing NGSO user terminals and/or gateways, resulting in weakened competition and worse outcomes for consumers

2.25 A network licence allows the licence holder to deploy user terminals anywhere in the UK. This creates a risk that a user terminal placed close to existing user terminals and/or

gateways of current operators would increase the likelihood of interference. This could lead to worse outcomes for consumers in terms of reduced quality of service by one or more operators. If the quality of service of one or more satellite operators deteriorated to the point that they became ineffective competitors, this could lead to reduced choice and worse quality of service and/or higher prices for consumers.

2.26 Ofcom's preliminary assessment is that coexistence between NSLComm's proposed system and existing NGSO systems is possible. Since the competition concerns outlined above would be caused by interference, our preliminary view is that potential competition risk 1 is unlikely.

Potential risk 2: User terminals are unable to coexist with future NGSO systems, creating a barrier to entry to the market and in turn restricting competition

- 2.27 Similar to the above, there is a risk that a new NGSO system and in particular its deployment of user terminals around the UK imposes constraints on subsequent entrants due to technical barriers to coexistence between its system and future systems. This could form a barrier to future entry to the market, reducing competition and consumer choice, leading to worse outcomes for consumers.
- 2.28 Ofcom's preliminary assessment is that coexistence between future NGSO systems and the BeetleSat system is possible. Since the competition concern outlined above would be created by an inability to coexist with future systems, our preliminary view is that potential competition risk 2 is unlikely.

Potential risk 3: Operators not coordinating in good faith could hinder the ability of current and future operators to provide their service

- 2.29 As a general point, operators not coordinating in good faith could hinder the ability of current operators to provide their service. This could also create uncertainly for potential entrants and thereby act as a barrier to entry, leading to a lessening of competition.
- 2.30 Our statement highlights "the importance of all operators, regardless of their filing date, working in good faith to reach coordination agreements." Should operators fail to coordinate in good faith, we could use our enforcement powers to remedy an issue. On this basis, our preliminary assessment is that Ofcom is equipped through its enforcement powers to remedy situations in which one or more operators fail to coordinate in good faith. This should alleviate any concerns over the potential for competition risk 3 to materialise in relation to BeetleSat's application.
- 2.31 On this basis, our initial view is that there would not be a material risk to competition.

Benefits

2.32 As described in our approach to competition:

"A network licence is necessary for an operator to deploy user terminals in the UK... Granting NGSO network licence applications is thus likely to benefit customers and consumers and supports Ofcom's strategic priority to get everyone connected (see above). Since issuing a new network licence allows market entry it also has the potential, if a service is deployed, to promote greater competition (assuming that it can coexist with other authorised systems)."

² Such a degradation of service quality could apply to both NSLComm and the existing operator or operators.

- 2.33 NSLComm is proposing to provide "a premium complementary backhaul layer (in LEO) for both terrestrial and satellite operators and telecommunications providers looking to enhance their existing solutions for the benefit of their user base."
- 2.34 NSLComm said in their application that the network "will serve a variety of verticals and end user applications, for both fixed and mobile uses, within the terrestrial (land-based), maritime and aeronautical sectors." The sectors include maritime, aviation, trunking/VSAT backhaul for terrestrial-based services, military SatCom, and enterprise. More detail can be found in section 2 of NSLComm's application.
- 2.35 As a consequence, our preliminary view is that the BeetleSat system has the potential to provide services that provide further connectivity options to customers in the UK, in addition to those of the four existing NGSO network licence holders.

Consultation question 4:

Do you believe the NGSO system in the application would benefit or harm future competition between NGSO services in the UK? Please provide details.

Other concerns

2.36 Coexistence and competition are the two issues on which we expect to make our licensing decisions (as set out in the NGSO Licensing updates Statement).

Consultation question 5:

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

Equality and Welsh language impact assessment

- 2.37 We have included a summary of our approach to impact assessments in Annex A1, together with an Equality impact assessment and Welsh language impact assessment.
- 2.38 By granting the licence and facilitating further access to broadband via satellite, we consider that our proposals are likely to have a particularly positive impacts on groups of persons living in more rural or remote areas including in Scotland, Wales and Northern Ireland and improve equality of opportunity in those areas. We have not identified any adverse impacts on specific groups of persons that are likely to be affected in a different way to the general population.

Question 6 Do you agree with our assessment of the potential impact on specific groups of persons?

2.39 Our proposals to grant the licence should improve broadband delivery for consumers living in specific areas and we do not therefore consider our proposals have any impact on our Welsh language obligations. Our proposal also related to a nationwide licensing regime and the relevant licence products are available for anyone within the UK to apply.

Consultation Question 7: Do you agree with our assessment of the potential impact of our proposal on the Welsh language?

Proposal to grant application

2.40 Taking the evidence presented by NSLComm and our assessment of the risks and benefits of granting this licence application, we propose to grant NSLComm's application for an Earth Station Network licence.

3. Next steps

- 3.1 Details of the application (BEETLESAT-NET-1) are available under the "Applications received" section of <u>our website</u>. We welcome comments on the application by 5pm on 29 February 2024. Responses should be submitted electronically to <u>ngso.licensing@ofcom.org.uk</u>, using the response form indicated in Annex 1.
- 3.2 Following this, we will review responses and publish our decision.

A1 Impact assessments

- 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. Section 4 of our statement on non-geostationary satellite systems also sets out how we assess the impact of applications for Non-Geostationary Earth Stations.
- A1.2 More generally, 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.
- A1.3 Our preliminary view is that granting a licence to BeetleSat system has the potential to provide services that provide further connectivity options to customers in the UK and will result in overall benefits to consumers and citizens. We assess the likely impact of granting the licence more fully in Section 2 above, in relation to potential impacts on coexistence and competition.

Equality impact assessment

- A1.4 We have given careful consideration to whether our proposal 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 whether 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 1998.³
- A1.5 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 <u>impact assessment guidance</u>).
- A1.6 In particular, section 3(4) of the Act also 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:
 - a) the vulnerability of children and of others whose circumstances appear to us to put them in need of special protection;
 - b) the needs of persons with disabilities, older persons and persons on low incomes; and
 - c) 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.

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³ Further detail is set out in section 149 of the Equality Act 2010 and section 75 of the Northern Ireland Act 1998.

- A1.5 We examine the potential impact our policy is likely to have on people, depending on their personal circumstances. This also 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.
- A1.6 By granting the licence and facilitating further access to broadband via satellite, we consider that our proposals are likely to have a particularly positive impacts on groups of persons living in more rural or remote areas including in Scotland, Wales and Northern Ireland and improve equality of opportunity in those areas. We have not identified any adverse impacts on specific groups of persons that are likely to be affected in a different way to the general population.

Welsh language impact assessment

- A1.7 The Welsh Language (Wales) Measure 2011 made the Welsh language an officially recognised language in Wales. Ofcom is 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).⁴
- A1.8 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 so as to have, or increase, a positive impact, or not to have adverse effects or to decrease any adverse effects.
- A1.9 Our proposals to grant the licence should improve broadband delivery for consumers living in specific areas and we do not therefore consider our proposals have any impact on our Welsh language obligations. Our proposal also related to a nationwide licensing regime and the relevant licence products are available for anyone within the UK to apply.
- A1.10 We note that Ofcom's current practice is to offer to produce spectrum licences in Welsh, and when requested does provide licences in Welsh, in accordance with its obligations set by the Welsh Language Commissioner. Ofcom will continue to take this approach in the future in relation to spectrum licences.

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⁴ 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.

A2 Responding to this consultation

How to respond

- A2.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 29 February 2024.
- A2.2 You can download a response form from https://www.ofcom.org.uk/consultations-and-statements/category-3/application-for-non-geostationary-earth-station-network-licence. You can return this by email or post to the address provided in the response form.
- A2.3 If your response is a large file, or has supporting charts, tables or other data, please email it to NGSO.licensing@ofcom.org.uk, as an attachment in Microsoft Word format, together with the cover sheet. This email address is for all matters related to NGSO licensing.
- A2.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:

NGSO Licensing Ofcom Riverside House 2A Southwark Bridge Road London SE1 9HA

- A2.5 We welcome responses in formats other than print, for example an audio recording or a British Sign Language video. To respond in BSL:
 - send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, wmv or QuickTime files; or
 - upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.
- A2.6 We will publish a transcript of any audio or video responses we receive (unless your response is confidential)
- A2.7 We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt of a response submitted to us by email.
- A2.8 You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.
- A2.9 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex X. It would also help if you could explain why you hold your views, and what you think the effect of Ofcom's proposals would be.
- A2.10 If you want to discuss the issues and questions raised in this consultation, please email ngso.licensing@ofcom.org.uk

Confidentiality

- A2.11 Consultations are more effective if we publish the responses before the consultation period closes. This can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish responses on the Ofcom website at regular intervals during and after the consultation period.
- A2.12 If you think your response should be kept confidential, please specify which part(s) this applies to and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.
- A2.13 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A2.14 To fulfil our pre-disclosure duty, we may share a copy of your response with the relevant government department before we publish it on our website.
- A2.15 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's intellectual property rights are explained further in our Terms of Use.

Next steps

- A2.16 Following this consultation period, Ofcom plans to publish a statement.
- A2.17 If you wish, you can register to receive mail updates alerting you to new Ofcom publications.

Ofcom's consultation processes

- A2.18 Of com aims to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annex A3
- A2.19 If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how Ofcom could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.
- A2.20 If you would like to discuss these issues, or Ofcom's consultation processes more generally, please contact the corporation secretary:
- A2.21 Corporation Secretary

Ofcom

Riverside House

2a Southwark Bridge Road

London SE1 9HA

Email: corporationsecretary@ofcom.org.uk

A3 Ofcom's consultation principles

A3.1 Of com has seven principles that it follows for every public written consultation:

Before the consultation

A3.2 Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. If we do not have enough time to do this, we will hold an open meeting to explain our proposals, shortly after announcing the consultation.

During the consultation

- A3.3 We will be clear about whom we are consulting, why, on what questions and for how long.
- A3.4 We will make the consultation document as short and simple as possible, with an overview of no more than two pages. We will try to make it as easy as possible for people to give us a written response.
- A3.5 We will consult for up to ten weeks, depending on the potential impact of our proposals.
- A3.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Ofcom's Consultation Champion is the main person to contact if you have views on the way we run our consultations.
- A3.7 If we are not able to follow any of these seven principles, we will explain why.

After the consultation

A3.8 We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish the responses on our website at regular intervals during and after the consultation period. After the consultation we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A4 Consultation coversheet

Basic details								
Consultation title:								
To (Ofcom contact): Name of respondent: Representing (self or organisation/s):								
						Address (if not received	by email):	
						Confidential	ity	
Please tick below what	part of your response y	ou consider is confidential, giving your reasons why						
 Nothing 								
 Name/co 	ntact details/job title							
• Whole re	•							
Organisat								
Part of th	e response							
If you selected 'Part of t	:he response', please sp	pecify which parts:						
still publish a reference	to the contents of you	or your organisation not to be published, can Ofcom response (including, for any confidential parts, a pecific information or enable you to be identified)?						
Declaration								
that Ofcom can publish publish all responses, in	. However, in supplying cluding those which arnt my response by ema	th this cover sheet is a formal consultation response this response, I understand that Ofcom may need to e marked as confidential, in order to meet legal il, Ofcom can disregard any standard e-mail text about is.						
•	ential (in whole or in pa	cervals during and after the consultation period. If your rt), and you would prefer us to publish your response cick here.						
Name	Signed	d (if hard copy)						

A5 Consultation questions

A5.1 We are seeking comments from stakeholders on the BeetleSat application from NSLComm for an NGSO Earth Station Network licence in relation to the following questions:

Question 1: Do you anticipate this satellite network will pose coexistence challenges to existing services?

Question 2: Are the measures set out by the applicant to enable coexistence with future systems reasonable?

Question 3: Do you assess that the measures put forward will allow this satellite network to coexist with other services?

Question 4: Do you believe the NGSO system in the application would benefit or harm future competition between NGSO services in the UK? Please provide details.

Question 5: Do you have any additional concerns or comments regarding the application?

Question 6: Do you agree with our assessment of the potential impact on specific groups?

Question 7: Do you agree with our assessment of the potential impact of our proposal on the Welsh language?