Recognised Spectrum Access (RSA) for Receive Only Earth Stations

Statement on introducing RSA in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz and Statutory notice of Ofcom's proposal to make regulations

Consultation

Publication date: 31 March 2015

Closing Date for Responses: 5 May 2015

About this document

This document outlines Ofcom's decision to extend Recognised Spectrum Access (RSA) to two new frequency bands in order to promote the more efficient use of spectrum. RSA is a means for Ofcom, in its national spectrum planning, to take into account the use of frequencies for the reception of services that do not need to be licensed.

We are extending RSA to 'receive-only earth stations' operating in the 7850 – 7900 MHz band and the 25.5 – 26.5 GHz band. These receive-only earth stations are ground based terminals used to receive signals from meteorological satellites, earth exploration satellites and space missions. As their name suggests, they receive but do not transmit.

We also include a consultation on the proposed draft regulations to give effect to our policy decisions. The consultation closes on 5 May 2015.

Contents

Section 1

Summary

1.1 In September 2014 Ofcom published a consultation (the "September 2014 Consultation")[1] setting out proposals to extend Recognised Spectrum Access (RSA) for receive-only earth stations (ROES) to the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz. RSA is a means for Ofcom to take into account, within national spectrum planning, the use of frequencies used for the reception of services that do not need to be licensed.

1.2 In this document, we consider the responses to that consultation and set out our policy decisions. In addition, we include a consultation on draft regulations and an order that we propose to make in order to give effect to our policy decisions.

1.3 Respondents to the September 2014 Consultation expressed a range of views, but on balance there was broad support for our key proposals. Having considered the responses, we have concluded that that is appropriate to:

- make RSA for ROES available in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz;
- apply the same process for treating applications for grants of RSA for ROES, including the required technical and geographical parameters, that applies in existing frequency bands where RSA for ROES is available, as described in Annex 13;
- make grants of RSA for ROES of indefinite duration (i.e. with no fixed end date), continuing in force until revoked. We will also provide for a 5-year period of notice of revocation, except where earlier revocation is necessary or appropriate;
- publish relevant information about grants of RSA for ROES and make them available for trading and conversion;
- charge fees (payable annually) for the grant of RSA for ROES according to the frequency band of use, the required bandwidth, recognised interference level and the type of satellite, spacecraft or other object in space (i.e., geostationary or non-geostationary) from which a ROES receives a radio communications service, subject to a minimum fee of £500. The level of these fees will be as follows:

7850 – 7900 MHz

	Recognised Interference Level		
	-156 dBW/MHz to less than -146 dBW/MHz	-146 dBW/MHz to less than -136 dBW/MHz	-136 dBW/MHz or higher
Fee/MHz	**£46**	**£33**	**£23**

[1] http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/?utm_source=updates&utm_medium=email&utm_campaign=recognised-spectrum-access-receive-only-earth-stations

25.5 – 26.5 GHz (geostationary)

	Recognised Interference Level		
	-159 dBW/MHz to less than -149 dBW/MHz	-149 dBW/MHz to less than -139 dBW/MHz	-139 dBW/MHz or higher
Fee/MHz	**£4**	**£2**	**£1**

25.5 – 26.5 GHz (non-geostationary)

	Recognised Interference Level		
	-159 dBW/MHz to less than -149 dBW/MHz	-149 dBW/MHz to less than -139 dBW/MHz	-139 dBW/MHz or higher
Fee/MHz	**£20**	**£10**	**£5**

1.4 We are currently undertaking a separate review of fees for fixed links and earth stations which will consider the bands in which we will make RSA for ROES available. That review is likely to consider various factors affecting the value of spectrum and assess the case for location based pricing to reflect the geographic distribution of demand for spectrum.

Statutory notice of Ofcom's proposal to make regulations

1.5 In accordance with the requirements of section 122(4) and (5) of the Wireless Telegraphy Act 2006 (the 'WT Act'), this document gives notice of our proposal to make the regulations and order that are necessary to make RSA for ROES available in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz. The following proposed regulations and order are intended to give effect to the policy decisions set out in this statement:

a) The Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Regulations 2015;

b) The Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Order 2015;

c) The Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2015;

d) The Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) Regulations 2015; and

e) The Wireless Telegraphy (Register) (Amendment) Regulations 2015.

1.6 The draft regulations and order are provided in Annexes 8 – 12 of this document and their general effect is set out in Section 5 of this document.

1.7 Hard copies of this notice and the proposed regulations and order can be obtained from:

James Richardson
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA

E-mail: james.richardson@ofcom.org.uk
Tel: 020 7981 3154

1.8 Electronic copies are also available and we have published this notice on Ofcom's website http://www.ofcom.org.uk.

1.9 We invite comments on the proposed regulations and order by 5pm on 5 May 2015. Subject to consideration of responses, we intend to bring the new regulations into force by August 2015. A regulatory impact assessment for the proposed regulations and order is contained in Annex 5 of this document.

Section 2

Introduction and background

2.1 This document sets out our decisions in relation to the consultation we published on 11 September 2014 (the "September 2014 Consultation")[2] which proposes to extend Recognised Spectrum Access (RSA) for receive-only earth stations (ROES) to the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

2.2 Also, in accordance with the requirements of section 122(4) and (5) of the Wireless Telegraphy Act 2006 (the "WT Act"), this document gives notice of our proposal to make the necessary regulations and order to:

- allow Ofcom to grant RSA for ROES in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz;
- limit the number of grants of RSA in these bands;
- allow Ofcom to set fees for grants of RSA in these bands;
- allow trading and conversion of grants of RSA in these bands; and
- allow Ofcom to publish details of the grants of RSA in the Wireless Telegraphy Register (the "WT Register").

2.3 The draft regulations and order are provided in Annexes 8 – 12 of this document.

2.4 The remainder of this section provides:

- information on our legal framework for managing the radio spectrum including RSA;
- a summary of our proposals in the September 2014 Consultation; and
- an outline of the structure of the rest of this document.

Legal framework

2.5 Section 8(1) of the Wireless Telegraphy Act 2006 (the "WT Act") makes it an offence for any person to establish or use any station for wireless telegraphy or to install or use any apparatus for wireless telegraphy except under and in accordance with a licence granted by us under that section.

2.6 However, licensing is reserved for equipment that we consider has the potential to cause harmful interference. Under section 8(4) of the WT Act, we have the duty to exempt from licensing any use of wireless telegraphy apparatus that we consider is not likely to cause harmful interference.

2.7 Receive-only equipment, such as receive-only earth stations, is licence exempt, as it is unlikely to cause harmful interference to other users of spectrum. However, RSA

[2] http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/?utm_source=updates&utm_medium=email&utm_campaign=recognised-spectrum-access-receive-only-earth-stations

can provide these licence exempt users with an alternative form of spectrum holding which gives protection from interference and which can be applied for on a voluntary basis, as explained below.

2.8 Section 18 of the WT Act prescribes the circumstances relevant for a grant of RSA, namely:

- a person is proposing to use or to continue to use a station or apparatus for wireless telegraphy;
- the circumstances of the use are circumstances specified for the purposes of that section in regulations made by Ofcom;
- that use does not require a wireless telegraphy licence but will involve the emission of electromagnetic energy with a view to the reception of anything at places in the United Kingdom or in the territorial waters adjacent to the United Kingdom; and
- for the purposes of that section it is immaterial whether the emissions are from a place within the United Kingdom or from a place outside the United Kingdom.

2.9 Put simply, the grant of RSA would have the effect of requiring us, under section 20 of the WT Act, to take account of the use of radio frequencies by receiving equipment on a comparable basis to a licensed use. Where for instance we exercise a licensing function under section 8 of the WT Act, we would be under a duty to take into account the existence of any grant of RSA in respect of receive-only earth stations that is in force and the provisions imposing restrictions and conditions subject to which the grant has effect to the same extent as we would take into account a wireless telegraphy licence.

2.10 Section 27 of the WT Act empowers us to make regulations to provide for the conversion of a grant of RSA into a wireless telegraphy licence and vice versa.

2.11 In addition to specifying the circumstances of the use of RSA in regulations made by us, we also have powers to make regulations under Schedule 2 to the WT Act to prescribe the procedures in accordance with which an application for a grant of RSA must be determined. Such procedures would include provision for:

- time limits for dealing with applications for a grant of RSA;
- requirements which must be met before a grant is made; and
- the restrictions and conditions to which a grant may be made subject.

2.12 Under Schedule 2 to the WT Act, we also have powers to revoke and modify a grant of RSA.

2.13 Section 30 of the WT Act empowers us to make regulations to provide for rights and obligations under a grant of RSA to be tradable and convertible to rights and obligations under a WT licence (and vice versa).

2.14 Finally, section 21 of the WT Act empowers us to make regulations to prescribe fees payable for the making of a grant of RSA. Under section 22 of the WT Act, we may, if we think fit in the light (in particular) of our duties under section 3 of the WT Act, prescribe fees which would be greater than those that would be necessary for the

purposes of recovering costs incurred by us in connection with our functions under the enactments relating to the management of the radio spectrum. Article 14 of Directive 2002/20/EC, as amended by Directive 2009/140/EC (the "Authorisation Directive"), requires fees for rights to use spectrum to be objectively justified, transparent, non-discriminatory and proportionate.

Summary of our proposals in the September 2014 consultation

2.15 In the September 2014 Consultation, we made four main proposals for the extension of RSA for ROES. Specifically we proposed to:

- make RSA available for ROES operating in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz;
- charge fees for the grant of RSA for ROES in the 7850 – 7900 MHz frequency band which are the same as the fees already charged for grants of RSA in the adjacent band 7750 – 7850 MHz, which are set on the basis of administered incentive pricing (AIP);
- charge fees for the grant of RSA for ROES in the 25.5 – 26.5 GHz band that are set on the basis of AIP; and
- publish information about grants of RSA for ROES and make them available for trading and conversion.

Structure of this document

2.16 The remainder of this document is structured as follows:

- **Section 3** provides a summary of the responses to the September 2014 Consultation along with our assessment of those responses.
- **Section 4** sets out our decision for making RSA available for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.
- **Section 5** explains the general effect of the proposed regulations and order which would give effect to our decisions. The draft regulations and order are provided in Annexes 8 – 12 of this document. Regulatory impact assessments of the proposed regulations and order are provided in Annex 5.
- **Section 6** outlines our anticipated next steps following this Statement and Notice on draft regulations.

Section 3

Review of responses

Overview

3.1 In the September 2014 Consultation, we asked three questions in relation to our proposals to extend RSA for ROES:

- *Question 1) Do you agree that Ofcom should make RSA for receive-only earth stations (ROES) available in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz? What is the source and scale of demand you foresee for the use of ROES in these bands?*
- *Question 2) Do you agree with the approach proposed to set fees for the grant of RSA for receive-only earth stations (ROES) in the bands 7850 – 7900 MHz and 25.5 – 26.5 GHz?*
- *Question 3) Do you have any other comments on the process or conditions that we propose to apply to RSA for receive-only earth stations (ROES) in the bands 7850 – 7900 MHz and 25.5 – 26.5 GHz?*

3.2 We received eight responses to the September 2014 Consultation, one of which was submitted to us on a confidential basis. The seven non-confidential responses can be found on our website[3] and the names of those respondents are listed in Annex 6 of this document. Our consideration of the general comments raised by respondents is set out in the following sub-sections:

- Principle of introducing RSA for ROES (including expected demand);
- Process for granting RSA for ROES (including technical and geographic parameters);
- Fees for grants of RSA for ROES;
- Term of grant;
- Tradability and conversion;
- Publication of information;
- Impact of sharing between ROES and fixed services; and
- Extending RSA for ROES to other bands.

3.3 Annex 7 addresses a number of more specific points raised in the responses.

[3] http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/?showResponses=true

Consideration of responses

Principle of introducing RSA for ROES (including expected demand)

Ofcom's proposal

3.4 In the September 2014 Consultation, we proposed to make RSA available to ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz. This was to respond to known demand from a small number of stakeholders planning to use earth stations to provide downlinks for future satellite and space missions.

Stakeholders' responses

3.5 The majority of respondents expressed support for the extension of RSA for ROES to the frequency bands 7850 – 7900 MHz and/or 25.5 – 26.5 GHz. One respondent did not express a view. Those in support said that RSA would provide regulatory certainty for ROES operators that require protection from interference from other radio users. In addition, some respondents said that the availability of RSA would put the UK in line with other European countries and contribute to investor confidence in developing ROES facilities in the UK.

3.6 Many of the respondents expect there to be a small, yet significant demand for the recognition of ROES operations in the UK in the bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

3.7 For the 7850 – 7900 MHz band, the Met Office said that in addition to their ROES site in Exeter, there is likely to be some demand from the Dundee University satellite receiving facility and also potential demand from other environmentally focussed organisations. The UK Space Agency (UKSA) said that the band 7850 – 7900 MHz is used for meteorological satellite services and that the satellite operators ESA and EUMETSAT both have an interest in the use of this spectrum.

3.8 Concerning the frequency band 25.5 – 26.5 GHz, the European Space Agency (ESA) said that it has recently opened a new centre (called ECSAT) in the UK at Harwell and was keen to understand how Ofcom's decisions may affect future expansion of facilities at this centre. UKSA said that an earth station with a 6-metre antenna operating in the 25.5 – 27 GHz band has recently been installed at the Harwell campus. ESA expects a small demand (perhaps two or three ROES locations) in the 25.5 – 26.5 GHz band, while Avanti Communications plc and techUK said the number of sites would probably be fewer than 10-20. ESA added that while there may be demand for multiple earth stations, economies of scale would mean that many of these stations would be co-located at a fewer number of sites.

3.9 Avanti Communications plc and techUK expect that the 25.5 – 26.5 GHz band will support various important European satellite systems including EUMETSAT's already procured Meteosat Third Generation (MTG) satellites and ESA's already procured data relay satellites EDRS-A / EDRS-C. ESA said it is targeting the 25.5 – 26.5 GHz band for many future satellites and that the one that may carry the highest interest from the UK is the European Data Relay Satellite (EDRS) which is strongly supported by the UK government from a financial point of view and in terms of industrial involvement in the satellite development. Some respondents added that the wide bandwidth available in the 25.5 – 26.5 GHz is required to support more sophisticated satellites requiring high rate data downlinks.

Ofcom response

3.10 The information provided by respondents confirms our understanding that there is demand for RSA for ROES in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz in the UK, although this is likely to be small at the moment. We believe that the introduction of RSA in these bands will allow operators of ROES to provide valuable services with enhanced confidence about the levels of interference they can expect to receive.

3.11 We have therefore decided to make RSA for ROES available in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

Process for granting RSA for ROES (including technical and geographic parameters)

Ofcom's proposal

3.12 In the September 2014 consultation, we proposed to apply the same process for treating applications for grants of RSA for ROES, including the required technical and geographical parameters, that applies in existing frequency bands where RSA for ROES is available.

Stakeholders' responses

3.13 We did not receive any comments on the proposed process, including the required technical and geographical parameters.

Ofcom response

3.14 We have therefore decided to implement the process for granting RSA for ROES, as described in Annex 13.

Fees for grants of RSA for ROES

Ofcom's proposal

3.15 In the September 2014 Consultation, we proposed that the holders of RSA grants for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz should pay AIP-based fees derived by using the same fee structure and principles that apply to RSA for ROES in existing frequency bands.

Stakeholders' responses

3.16 Alcatel-Lucent, Avanti Communications plc, UKSA and techUK supported the general approach proposed by Ofcom for setting fees for RSA for ROES. The Met Office agreed with the proposed methodology for charging in the 7850 – 7900 MHz band. Some of these respondents said that fees for RSA should be reasonable, transparent and fair and should be set at a level which is consistent with the costs already incurred by existing users of the frequency band in question.

3.17 On the other hand, ESA considers that the fee/MHz values indicated for the 25.5 – 26.5 GHz band are too high, given that coordination areas would be smaller than at lower frequency bands and because ROES in this band require a wide bandwidth. In addition, O3b believes that one cannot generalise that an earth station receiving signals from a satellite in non-geostationary satellite orbit (NGSO) is more likely to be

susceptible to interference than an earth station receiving signals from a satellite in the geostationary satellite orbit (GSO) and that GSO earth stations are just as likely to operate at low elevation angle as NGSO earth stations. O3b recommended that fees are based on the minimum elevation angle to which an earth station operates, irrespective of whether it receives signals from a geostationary or non-geostationary satellite.

Ofcom response

3.18 As explained in the September 2014 Consultation, our proposals for setting fees for RSA for ROES in the two additional frequency bands were based on using the same charging principles and fees structure applying to RSA for ROES operating in other bands, rather than to carry out a comprehensive review of fees. We remain of the view that this approach is appropriate because it ensures that fees reflect those already paid by other spectrum users and it allows earlier access to the frequency bands by ROES, with the associated benefits that that brings.

3.19 In general, we agree that the size of the coordination area, and potential for frequency congestion, decreases with increasing frequency. This is due to the effects of propagation of radio waves through free space. This is reflected by the fact that the fees proposed for ROES operating within the 25.5 – 26.5 GHz band are lower than those for ROES operating within the 7850 – 7900 MHz band. As is generally the case for fees set on the basis of AIP, users are required to pay for the amount of spectrum they use. If a particular ROES application requires a relatively large bandwidth, the user should expect to pay a correspondingly large spectrum fee.

3.20 We also consider that the method we proposed to use to derive the fee for a ROES receiving signals from a satellite in NGSO is reasonable. This is because although GSO and NGSO earth stations may operate down to low elevation angles, the NGSO earth station may be required to operate over a wider range of angles of azimuth, and therefore has the potential to impact on spectrum use over a wider geographical area.

3.21 In advance of a comprehensive fee review, our decision should be seen in light of the need to create a pragmatic interim approach for extending RSA for ROES to the two additional frequency bands. We are currently undertaking a separate review of fees for fixed links and earth stations which will consider the bands in which we will make RSA for ROES available. That review is likely to consider various factors affecting the value of spectrum and assess the case for location based pricing to reflect the geographic distribution of demand for spectrum.

3.22 We have therefore decided to charge annual fees for the grant of RSA for ROES according to the frequency band of use, the required bandwidth, recognised interference level and the type of satellite, spacecraft or other object in space (i.e., geostationary or non-geostationary) from which a ROES receives a radio communications service, subject to a minimum fee of £500. The level of these annual fees will be as follows:

7850 – 7900 MHz

	Recognised Interference Level		
	-156 dBW/MHz to less than -146 dBW/MHz	-146 dBW/MHz to less than -136 dBW/MHz	-136 dBW/MHz or higher
Fee/MHz	**£46**	**£33**	**£23**

25.5 – 26.5 GHz (geostationary)

	Recognised Interference Level		
	-159 dBW/MHz to less than -149 dBW/MHz	-149 dBW/MHz to less than -139 dBW/MHz	-139 dBW/MHz or higher
Fee/MHz	**£4**	**£2**	**£1**

25.5 – 26.5 GHz (non-geostationary)

	Recognised Interference Level		
	-159 dBW/MHz to less than -149 dBW/MHz	-149 dBW/MHz to less than -139 dBW/MHz	-139 dBW/MHz or higher
Fee/MHz	**£20**	**£10**	**£5**

Term of grant

Ofcom's proposal

3.23 In the September 2014 Consultation, we proposed that RSA for ROES operating within the bands 7850 – 7900 MHz and 25.5 – 26.5 GHz should be granted with no fixed end date but subject to a 5-year notice of revocation, except where earlier revocation is necessary (e.g., where necessary in the interests of national security, in the interests of safety of the public or public health, to comply with an international obligation or a direction from the Secretary of State). We considered that this would give sufficient security to RSA-holders while providing necessary flexibility for us to intervene to change use of the band if necessary and justified for spectrum management reasons[4].

Stakeholders' comments

3.24 ESA and UKSA considers that the proposed 5-year notice period for revocation of a grant of RSA for ROES is too short given the typical project lifetimes of satellite systems, which can be up to 30 years from conception to end of life.

[4] Paragraph 3.35 of the September 2014 Consultation.

Ofcom response

3.25 We recognise that the useful lifetime of satellites and earth stations is normally longer than five years. However, we note that a 5-year period of notice of revocation, except where earlier revocation is necessary, is consistent with the notice period of revocation that is typically required in relation to tradable licences and RSA, including fixed services and earth stations, which have similar equipment lifetime expectations. We consider that a 5-year period is necessary to provide flexibility for us to intervene to change use of the band if necessary and justified for spectrum management reasons. An example of where we might intervene is where the use of spectrum by a ROES impacts upon an area that might become available for high-value alternate use, particularly in or near dense urban areas.

3.26 Having considered stakeholders' responses, we remain of the view that it is appropriate to make the grants of RSA for ROES operating within the bands 7850 – 7900 MHz and 25.5 – 26.5 GHz of indefinite duration (i.e. with no fixed end date), continuing in force until revoked. We also consider it appropriate to provide for a 5-year period of notice of revocation, except where earlier revocation is necessary or appropriate.

Tradability and conversion

Ofcom's proposal

3.27 In the September 2014 Consultation, we proposed to allow trading and conversion of grants of RSA for ROES under the same procedure for trading that already applies for RSA for ROES in other frequency bands.

Stakeholders' responses

3.28 We did not receive any comments on our proposal to allow trading and conversion of grants of RSA for ROES in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

Ofcom response

3.29 We have therefore decided to allow trading and conversion of grants of RSA for ROES in the subject frequency bands.

Publication of information

Ofcom's proposal

3.30 In the September 2014 Consultation, we proposed to publish information about grants of RSA in the in the WT Register[5] and information about trades in the Transfer Notification Register[6] (the TNR).

Stakeholders' responses

3.31 We did not receive any comments on our proposal to publish information about grants of RSA for ROES in the WT Register and information about trades in the TNR.

[5] http://spectruminfo.ofcom.org.uk/spectrumInfo/licences
[6] http://spectruminfo.ofcom.org.uk/spectrumInfo/trades

Ofcom response

3.32 We have therefore decided to publish information in the WT Register and TNR in line with our proposals.

Impact of sharing between ROES and fixed services

Ofcom's proposal

3.33 In the September 2014 Consultation, we considered the impact that grants of RSA for ROES would have on fixed services that are currently licensed in the subject frequency bands.

Stakeholders' responses

3.34 Alcatel-Lucent believed that the development of the fixed service in the bands 7850 – 7900 MHz and 25.5 – 26.5 GHz may be impacted significantly, at least in areas where RSA will be granted to ROES stations. In the case of GSO earth stations, Alcatel-Lucent said the impact may be minimised by the use of mitigation techniques (site shielding, etc.), but that mitigation techniques would be difficult to implement in the case of NGSO earth stations.

3.35 On a related matter, UKSA asked how it would be possible to introduce a new ROES into an area already used by other services, such as fixed links.

Ofcom response

3.36 As with all frequency bands that are shared between different users, there is a potential impact on the ability for more than one user to have access to the same spectrum in the same geographic area. This situation already exists in the bands in question, where different fixed link users compete for access to spectrum. It is also no different to other frequency bands where Ofcom coordinates and assigns spectrum between earth stations and fixed links on a first-come, first-served basis.

3.37 In the bands 7850 – 7900 MHz and 25.5 – 26.5 GHz, we expect the number of ROES sites to be small and therefore the impact on existing fixed link users to be small. Nevertheless, it is important in this context that all users face equivalent incentives to use the spectrum efficiently. We expect that the application of AIP based fees and trading will encourage efficient use of spectrum and maximise benefits to society by ensuring the spectrum is made available to the highest value user. In addition, the structure of the fees that we intend to prescribe for RSA for ROES operating in the two additional frequency bands is designed to encourage ROES users to implement additional mitigation which would lessen the impact on fixed link users.

3.38 Because access to frequencies will be on a first-come, first-served basis (as with many other frequency bands), there may be occasions where an initial request for RSA is denied by our coordination and assignment system because of the presence of an existing, near-by fixed link. In such a situation, the earth station operator may wish to re-configure the operational parameters, including use of extra interference mitigation, or accept an alternate level of interference recognition. The ROES operator may also negotiate with the existing fixed link licensee to find an alternative agreement. Alternatively, the ROES operator may wish to site the earth station at an alternative location. It should also be noted that unlike licensed radio users, operators of receive-only earth stations may operate without the need for RSA.

Extending RSA for ROES to other bands

Ofcom's proposal

3.39 In the September 2014 Consultation, we did not propose to extend RSA for ROES to frequency bands other than 7850 – 7900 MHz and 25.5 – 26.5 GHz.

Stakeholders' comments

3.40 ESA, Met Office and UKSA noted that the 26.5 – 27 GHz band is also allocated in the Radio Regulations to the earth exploration-satellite service (EESS) and space research service (SRS) and encouraged Ofcom to consider the application of RSA for ROES in this frequency band.

Ofcom response

3.41 Ofcom does not have plans to make RSA for ROES available in the 26.5 – 27.0 GHz band. Although the Radio Regulations allocate this 500 MHz portion of spectrum to EESS and SRS downlinks, the band is designated "UK2" in the UK Frequency Allocation Table (UKFAT), which means that the MoD is responsible for managing the use of this band in the UK.

Other responses

3.42 Some of the more specific points raised in the responses to the September 2014 Consultation are addressed separately in Annex 7.

Section 4

Summary of Ofcom's decision

4.1 Having considered the responses to the September 2014 Consultation, we have decided to proceed with the extension of RSA for ROES on the following basis:

- we will make RSA for ROES available in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz;
- we will apply the same process for treating applications for grants of RSA for ROES, including the required technical and geographical parameters, that applies in existing frequency bands where RSA for ROES is available, as described in Annex 13;
- we will make grants of RSA for ROES of indefinite duration (i.e. with no fixed end date), continuing in force until revoked. We will also provide for a 5-year period of notice of revocation, except where earlier revocation is necessary or appropriate;
- we will publish relevant information about grants of RSA for ROES and make them available for trading and conversion;
- we will charge fees (payable annually) for the grant of RSA for ROES according to the frequency band of use, the required bandwidth, recognised interference level and the type of satellite, spacecraft or other object in space (i.e., geostationary or non-geostationary) from which a ROES receives a radio communications service, subject to a minimum fee of £500. The level of these fees will be as follows:

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25.5 – 26.5 GHz (geostationary)

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25.5 – 26.5 GHz (non-geostationary)

	Recognised Interference Level		
	-159 dBW/MHz to less than -149 dBW/MHz	-149 dBW/MHz to less than -139 dBW/MHz	-139 dBW/MHz or higher
Fee/MHz	**£20**	**£10**	**£5**

Section 5

General effect of the proposed regulations and order

The legislative framework

5.1 The WT Act empowers Ofcom to introduce RSA on a selective basis to manage the radio spectrum more effectively. In 2011, Ofcom made RSA available for ROES operating within the frequency bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz by making the following regulations and order:

a) the Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) Regulations 2011 (S.I. 2011/2763);

b) the Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) Order 2011 (S.I. 2011/2757);

c) the Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2011 (S.I. 2011/2762), amending the Wireless Telegraphy (Recognised Spectrum Access Charges) Regulations 2007 (S.I. 2007/392);

d) the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) (No. 2) Regulations 2011 (S.I. 2011/2761), amending the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) Regulations 2009 (S.I. 2009/17); and

e) the Wireless Telegraphy (Register) (Amendment) (No. 3) Regulations 2011 (S.I. 2011/2756), amending the Wireless Telegraphy (Register) Regulations 2004, which have been subsequently revoked and replaced by the Wireless Telegraphy (Register) Regulations 2012 (S.I. 2012/2186).

5.2 To give effect to Ofcom's decisions to make RSA available also for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz, the WT Act requires Ofcom to make regulations, and an order, by statutory instrument. Annexes 8-12 contain drafts of the regulations and order that Ofcom proposes to make. These proposed regulations and order will amend the existing regulations and order concerning grants of RSA for ROES.

The proposed regulations and order

Extent of application

5.3 The proposed regulations and order will apply in the United Kingdom. They do not extend to the Channel Islands and the Isle of Man.

The Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Regulations 2015

5.4 Under section 18 and Schedule 2 of the WT Act, we have powers to make regulations prescribing the circumstances of use for which we may make a grant of

RSA and the procedures in accordance with which an application for a grant of RSA must be determined. In 2011, Ofcom made the Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) Regulations 2011, which will be amended by the proposed regulations.

5.5 In particular, the proposed regulations will add these definitions:

a) "earth exploration satellite service", meaning a radio communications service between satellites in space and fixed wireless telegraphy stations on the ground used for earth observation purposes; and

b) "space research service", meaning a radio communications service between spacecraft or other objects in space and fixed wireless telegraphy stations on the ground used for scientific or technological research purposes.

5.6 The proposed regulations will also extend the circumstances of use for which Ofcom may make a grant of RSA to include:

a) receive-only stations operating within the 7850 – 7900 MHz frequency band to provide a meteorological satellite service; and

b) receive-only stations operating within the 25.5 – 26.5 GHz frequency band to provide either an earth exploration satellite service or a space research service.

The Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Order 2015

5.7 Under sections 29(1) to (3) of the WT Act, we have the power to make an order setting out the criteria that we will apply in determining the limit on the number of grants of RSA for ROES. In 2011, Ofcom made the Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) Oder 2011, which will be amended by the proposed order.

5.8 In particular, the proposed order will extend the frequencies for which we may grant RSA for ROES to include:

a) the 7850 – 7900 MHz frequency band, where it is used to provide a meteorological satellite service; and

b) the 25.5 – 26.5 GHz frequency band, where it is used to provide either an earth exploration satellite service or a space research service.

5.9 The proposed order will also add the definitions of "earth exploration satellite service" and "space research service", in line with the definitions proposed for the same terms in the Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Regulations 2015.

The Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2015

5.10 Under sections 21, 22(2) and (3) of the WT Act, we have powers to prescribe sums applicable to grants of RSA. Under section 22 of the WT Act, we may, if we think fit in the light (in particular) of our duties under section 3 of the WT Act, prescribe fees which would be greater than those that would be necessary for the purposes of

recovering costs incurred by us in connection with our radio spectrum functions. Article 13 of the Authorisation Directive[7] requires fees for rights to use spectrum to be objectively justified, transparent, non-discriminatory and proportionate.

5.11 In 2007, Ofcom made the Wireless Telegraphy (Recognised Spectrum Access Charges) Regulations 2007 (S.I. 2007/392), which were amended in 2011 to prescribe the appropriate fee for the grants of RSA for ROES operating within the frequency bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz. The proposed regulations will make further amendments to these regulations.

5.12 The charges set out in the Wireless Telegraphy (Recognised Spectrum Access Charges) Regulations 2007, as subsequently amended, are on a fee/MHz basis and vary depending on the service provided, the frequency band concerned and the recognised interference level.

5.13 The proposed regulations will prescribe the sums payable to Ofcom for the grants of RSA for ROES operating within the 7850 – 7900 MHz frequency band by extending to them the fee payable in relation to ROES operating within the 7750 – 7850 MHz frequency band. The proposed regulations will also prescribe the sums payable to Ofcom for the grants of RSA for ROES operating within the 25.6 – 26.5 GHz frequency band, distinguishing between ROES used for receiving a radio communications service from a satellite, spacecraft or other object in space that is geostationary or non-geostationary.

5.14 Furthermore, the proposed regulations will amend the ranges of "recognised interference level" on the basis of which the fee for each grant of RSA in respect of the frequency bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz (which will be extended to include also the frequencies up to 7900 MHz) will be determined (tables 1-3 in Schedule 2). These changes ensure that there is continuity between the different ranges of recognised interference level within the respective frequency band.

5.15 The proposed regulations will also set out the ranges of "recognised interference level" on the basis of which the fee for each grant of RSA in respect of the 25.5 – 26.5 GHz frequency band will be determined (tables 4 and 5, which will be added to tables 1 to 3 in Schedule 2).

The Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) Regulations 2015

5.16 Section 30 of the WT Act empowers Ofcom to make regulations to allow trading of licences and grants of RSA. In 2009, Ofcom made the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) Regulations 2009 (S.I. 17/2009), which were amended in 2011 to allow recipients of grants of RSA for ROES operating within the frequency bands 1690 – 1710 MHz, 3600 – 4200 MHz, 7750 – 7850 MHz to trade their grants[8]. The proposed regulations will make further amendments to these regulations.

5.17 The amendments proposed to the trading regulations will allow recipients of grants of RSA for ROES operating within the 7850 – 7900 MHz and 25.5 – 26.5 GHz frequency bands to trade their grants of RSA.

[7] Directive 2002/20/EC, as amended by Directive 2009/140/EC.
[8] The Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) Regulations 2009 were also amended in February 2011 (S.I. 2011/440).

The Wireless Telegraphy (Register) (Amendment) Regulations 2015

5.18 Section 31 of the WT Act allows Ofcom to make regulations to allow entry on the WT Register of relevant information relating to licences and grants of RSA which may be traded. In 2011, Ofcom allowed entry on the WT Register of relevant information concerning grants of RSA for ROES operating within the frequency bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz by making the Wireless Telegraphy (Register) (Amendment) (No. 3) Regulations 2011, which amended the Wireless Telegraphy (Register) Regulations 2004. These regulations have been subsequently revoked and replaced by the Wireless Telegraphy (Register) Regulations 2012 (S.I. 2012/2186), which were amended in 2013 (S.I. 2013/640). The proposed regulations will make further amendments to these regulations.

5.19 In particular, the proposed regulations will allow Ofcom to publish grants of RSA for ROES operating within the 7850 – 7900 MHz and 25.5 – 26.5 GHz frequency bands on the Wireless Telegraphy Register on the Ofcom website[9].

Question 1: Do you have any comment on the drafting of the proposed regulations and proposed order?

[9] http://spectruminfo.ofcom.org.uk/spectrumInfo/licences

Section 6

Next steps

6.1 Following the end of the consultation period for making representations on the draft regulations and order, we intend to consider stakeholders' responses and publish a Statement in June 2015 to set out our final decision on the regulations and order. We expect the regulations and order to come into force by August 2015. We also expect to be able to accept applications for RSA for ROES by August 2015.

Annex 1

Responding to this consultation

How to respond

A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 5 May 2015**.

A1.2 Ofcom strongly prefers to receive responses using the online web form at http://stakeholders.ofcom.org.uk/consultations/rsa-earth-stations-statement/howtorespond/form, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.

A1.3 For larger consultation responses – particularly those with supporting charts, tables or other data – please email RSA@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.

A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

James Richardson
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA

Fax: 020 7981 3208

A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.

A1.6 It would be helpful if your response could include direct answers to the question asked in this document, which is shown in Annex 4. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Further information

A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact James Richardson on 020 7981 3154.

Confidentiality

A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether

all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.

A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at http://www.ofcom.org.uk/terms-of-use/

Next steps

A1.11 Following the end of the consultation period, Ofcom intends to publish a statement in June 2015.

A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/email-updates/

Ofcom's consultation processes

A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.

A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.

A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Graham Howell, Secretary to the Corporation, who is Ofcom's consultation champion:

Graham Howell
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA

Tel: 020 7981 3601

Email Graham.Howell@ofcom.org.uk

Annex 2

Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. 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

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A2.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A2.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A2.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 3

Consultation response cover sheet

A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.

A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.

A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.

A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at http://stakeholders.ofcom.org.uk/consultations/consultation-response-coversheet/.

A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing ☐

Whole response ☐

Part of the response ☐

Name/contact details/job title ☐

Organisation ☐

If there is no separate annex, which parts?

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here. ☐

Name

Signed (if hard copy)

Annex 4

Consultation questions

A4.1 As required by section 122 of the WT Act, we must give notice of our proposals to make regulations and orders and consider any representations that we receive. Annexes 8-12 contain drafts of the regulations and order that Ofcom proposes to make.

Question 1: Do you have any comment on the drafting of the proposed regulations and proposed order?

Annex 5

Regulatory Impact Assessments

Introduction

A5.1 Ofcom acts consistently with Government practice that, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") should be undertaken. The analysis contained in this Annex is a RIA relating to the regulations and order that we propose to make to give effect to Ofcom's decisions to make RSA available for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

A5.2 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Act, which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

A5.3 In the present case, as the impact of the policy decisions that will be given effect by the proposed regulations and order has already been assessed in other documents referred to, a separate assessment for the regulations may not strictly be necessary. We nevertheless include these assessments, as a matter of good practice.

A5.4 You should send any comments on these regulatory impact assessments to us by the closing date for this consultation. We will consider all comments before deciding whether to make the draft regulations and order.

Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Regulations 2015

Regulatory impact assessment

Issued

March 2015

Impact Assessment

Introduction

A5.5 Ofcom acts consistently with Government practice that, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") should be undertaken.

A5.6 The analysis in this document, and set out more fully in the consultation documents and statements referred to below, is an impact assessment relating to the Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Regulations 2015 (the "regulations").

A5.7 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Communications Act 2003 (the "Act"), which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

A5.8 In the present case, as the impact of the policy decisions that will be given effect by the proposed regulations has already been assessed in other documents referred to, a separate assessment for the regulations may not strictly be necessary. We nevertheless include these annexes / assessments, as a matter of good practice.

A5.9 Section 18 of the WT Act prescribes the circumstances relevant for a grant of Recognised Spectrum Access (RSA), namely:

i) a person is proposing to use or to continue to use a station or apparatus for wireless telegraphy;

ii) the circumstances of the use are circumstances specified for the purposes of that section in regulations made by Ofcom;

iii) that use does not require a wireless telegraphy licence but will involve the emission of electromagnetic energy with a view to the reception of anything at places in the United Kingdom or in the territorial waters adjacent to the United Kingdom; and

iv) for the purposes of that section it is immaterial whether the emissions are from a place within the United Kingdom or from a place outside the United Kingdom.

A5.10 The purpose of the introduction of RSA is to provide a mechanism to give formal recognition to receive-only radio services and to complement licensing by providing an alternative form of spectrum holding that can be made tradable.

A5.11 Receive only satellite earth stations (ROES) that may currently operate in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz currently do so without being taken into account in Ofcom's assignment process.

A5.12 Ofcom carried out a RIA for the Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) Regulations 2011[10], which introduced RSA for ROES operating within the bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz. The proposed regulations would amend these regulations in order to extend RSA to the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

A5.13 Ofcom consulted[11], and is today publishing its decisions, on the policy behind the principal of introducing grants of RSA for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz, including the use of AIP.

A5.14 In consulting on and making these decisions we exercised the following powers and met the following duties.

The citizen and/or consumer interest

A5.15 Our principal duty under section 3 of the Act is to further the interests of citizens in relation to communications matters; and of consumers in relevant markets, where appropriate by promoting competition. We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. We must, in particular, secure the optimal use for wireless telegraphy of spectrum and have regard to the principle under which all regulatory activities should be targeted only at cases in which action is needed.

A5.16 In proposing these regulations we have considered the wider impact beyond immediate stakeholders in the radiocommunications sectors. We believe that the proposals will be of benefit to consumers and citizens by providing an assurance that valuable information and services can be provided in an environment where protection from interference to ROES is available. The information disseminated to ROES by space stations and satellites in the subject frequency bands is used to provide a diverse set of societal benefits including weather forecasting, climate and disaster monitoring, and also to further human endeavors such as mapping, population monitoring and the exploration of the universe.

Ofcom's policy objective

A5.17 We have a number of duties under section 3 of the WT Act. These include having regard when carrying out our radio spectrum functions to:

i) the extent that spectrum is available for use; and

ii) the desirability of promoting the efficient management and use of the spectrum for wireless telegraphy.

A5.18 The proposed regulations are intended to allow Ofcom to recognise the existence and protection requirements of ROES so that they can operate with minimal risk of

[10] See Annex 1.1 attached to Ofcom's statement of 30 November 2011 entitled 'Decision to make the Regulations for Recognised Spectrum Access (RSA) for Receive Only Earth Stations in the Bands 1690 – 1710 MHz, 3600 – 4200 MHz, and 7750 – 7850 MHz': http://stakeholders.ofcom.org.uk/binaries/consultations/rsa-earth-stations/statement/statement.pdf

[11] See Ofcom's consultation document of 11 September 2014, entitled 'Recognised Spectrum Access for Satellite Stations': http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/.

receiving interference from other licensed radio users. Providing formal recognition to ROES sites via grants of RSA will promote more efficient use of the radio spectrum.

Options considered

A5.19 The options available to us in relation to the introduction of these regulations are as follows:

- do nothing; or
- introduce the proposed regulations.

Analysis of the different options

A5.20 Some analysis of these two options was provided in the September 2014 Consultation and also in Section 4 and Annex 7 of this document.

A5.21 If we do nothing, operators of ROES in the subject frequency bands run the risk of receiving interference from licensed fixed point-to-point microwave links that operate in the same bands. This interference could undermine the utility of the earth stations. Not only could this represent a problem for the operators with sunk investments in their earth station, it could represent a sub-optimal use of spectrum.

A5.22 The proposed regulations will provide regulatory certainty for ROES operators who apply for, and are granted RSA. This ensures that operators of ROES can continue to provide valuable services with enhanced confidence about the levels of interference they can expect to receive. It also ensures that ROES operators have access to spectrum on an equitable basis with other licensed users and will lead to efficient use of spectrum.

A5.23 As RSA for ROES is a voluntary scheme, those operators who may wish to operate in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz without applying for a grant of RSA would be able to do so on a non-protected basis.

A5.24 As a consequence of introducing the proposed regulations, it is likely that the existing fixed link operators will see an increase in competition for the same spectrum resource. However, the introduction of AIP-based fees and trading ensures there are incentives for users to make efficient use of spectrum.

Costs to Ofcom and the public sector

A5.25 There are one-off administrative costs associated with making Statutory Instruments. We consider these implementation costs to be low. Ofcom would incur little additional cost as a result of this proposal. The framework for granting RSA for ROES has already been set up in relation to other frequency bands and including ROES operating in two additional frequency bands within the framework should require little additional cost.

Cost to business, including small business and the voluntary sector

A5.26 The business sectors most likely to be affected are fixed link operators as well as those involved in monitoring the natural environment of the earth and the exploration of space.

A5.27 The proposed regulations will allow operators of ROES who obtain grants of RSA to provide valuable services with enhanced confidence about the levels of interference they can expect to receive. It also ensures that ROES operators have access to spectrum on an equitable basis with other licensed users.

A5.28 Although existing licensed fixed link operators may see an increase in competition for use of frequencies, the impact is expected to be low because the demand for use of the frequency bands by ROES is likely to be low.

A5.29 We do not consider that our decision to make these regulations will have any material cost implications for the voluntary sector.

The preferred option

A5.30 Although difficult to quantify, we consider that the benefits of making the proposed regulations outweigh the costs. Our preferred option is therefore to make the proposed regulations.

Equality Impact Assessment

A5.31 Ofcom is separately required by statute to assess the potential impact of all our functions, policies, projects and practices on the following equality groups: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation. Equality Impact Assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

A5.32 We have not identified any particular impact of our proposals in relation to the identified equality groups. Specifically, we do not consider the impact of the proposals in this consultation to be to the detriment of any particular group within society. Nor have we seen the need to carry out separate EIAs in relation to the additional equality groups in Northern Ireland: religious belief, political opinion and dependants. This is because we anticipate that our proposals will not have a differential impact in Northern Ireland compared to consumers in general.

Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Order 2015

Regulatory impact assessment

Issued

March 2015

Impact Assessment

Introduction

A5.33 Ofcom acts consistently with Government practice that, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") should be undertaken.

A5.34 The analysis in this document, and set out more fully in the consultation documents and statements referred to below, is an impact assessment relating to the Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Order 2015 (the "order").

A5.35 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Communications Act 2003 (the "Act"), which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

A5.36 In the present case, as the impact of the policy decisions that will be given effect by the proposed order has already been assessed in other documents referred to, a separate assessment for the order may not strictly be necessary. We nevertheless include these annexes / assessments, as a matter of good practice.

A5.37 Section 18 of the WT Act prescribes the circumstances relevant for a grant of Recognised Spectrum Access (RSA), namely:

i) a person is proposing to use or to continue to use a station or apparatus for wireless telegraphy;

ii) the circumstances of the use are circumstances specified for the purposes of that section in regulations made by Ofcom;

iii) that use does not require a wireless telegraphy licence but will involve the emission of electromagnetic energy with a view to the reception of anything at places in the United Kingdom or in the territorial waters adjacent to the United Kingdom; and

iv) for the purposes of that section it is immaterial whether the emissions are from a place within the United Kingdom or from a place outside the United Kingdom.

A5.38 The purpose of the introduction of RSA is to provide a mechanism to give formal recognition to receive-only radio services and to complement licensing by providing an alternative form of spectrum holding that can be made tradable.

A5.39 Receive only satellite earth stations (ROES) that may currently operate in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz currently do so without being taken into account in Ofcom's assignment process.

A5.40 Ofcom carried out a RIA for the Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) Oder 2011[12], which introduced RSA for ROES operating within the bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz. The proposed order would amend the 2011 order to extend RSA to the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

A5.41 Ofcom consulted[13], and is today publishing its decisions, on the policy behind the principal of introducing grants of RSA for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz, including the use of AIP.

A5.42 In consulting on and making these decisions we exercised the following powers and met the following duties.

The citizen and/or consumer interest

A5.43 Our principal duty under section 3 of the Act is to further the interests of citizens in relation to communications matters; and of consumers in relevant markets, where appropriate by promoting competition. We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. We must, in particular, secure the optimal use for wireless telegraphy of spectrum and have regard to the principle under which all regulatory activities should be targeted only at cases in which action is needed.

A5.44 In proposing this order we have considered the wider impact beyond immediate stakeholders in the radiocommunications sectors. We believe that the proposals will be of benefit to consumers and citizens by providing an assurance that valuable information and services can be provided in an environment where protection from interference to ROES is available. The information disseminated to ROES by space stations and satellites in the subject frequency bands is used to provide a diverse set of societal benefits including weather forecasting, climate and disaster monitoring, and also to further human endeavors such as mapping, population monitoring and the exploration of the universe.

Ofcom's policy objective

A5.45 We have a number of duties under section 3 of the WT Act. These include having regard when carrying out our radio spectrum functions to:

i) the extent that spectrum is available for use; and

ii) the desirability of promoting the efficient management and use of the spectrum for wireless telegraphy.

[12] See Annex 1.1 attached to Ofcom's statement of 30 November 2011 entitled 'Decision to make the Regulations for Recognised Spectrum Access (RSA) for Receive Only Earth Stations in the Bands 1690 – 1710 MHz, 3600 – 4200 MHz, and 7750 – 7850 MHz': http://stakeholders.ofcom.org.uk/binaries/consultations/rsa-earth-stations/statement/statement.pdf

[13] See Ofcom's consultation document of 11 September 2014, entitled 'Recognised Spectrum Access for Satellite Stations': http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/.

A5.46 The proposed order is intended to allow Ofcom to limit the number of grants of RSA for ROES in the subject frequency bands in order to ensure efficient use of the radio spectrum.

Options considered

A5.47 The options available to us in relation to the introduction of this order are as follows:

- do nothing; or
- introduce the proposed order.

Analysis of the different options

A5.48 Some analysis of these two options was provided in the September 2014 Consultation and also in Section 4 and Annex 7 of this document.

A5.49 If we do nothing, we will be unable to limit the number of grants of RSA for ROES and as such will not be able to ensure efficient use of the spectrum subject to the grants.

A5.50 The proposed order will provide regulatory certainty for ROES operators who apply for, and are granted RSA along with other users who are licensed in the subject frequency bands.

A5.51 As RSA for ROES is a voluntary scheme, those operators who may wish to operate in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz without applying for a grant of RSA would be able to do so on a non-protected basis.

Costs to Ofcom and the public sector

A5.52 There are one-off administrative costs associated with making Statutory Instruments. We consider these implementation costs to be low. Ofcom would incur little additional cost as a result of this proposal. The framework for granting RSA for ROES has already been set up in relation to other frequency bands and including ROES operating in two additional frequency bands within the framework should require little additional cost.

Cost to business, including small business and the voluntary sector

A5.53 The business sectors most likely to be affected are fixed link operators as well as those involved in monitoring the natural environment of the earth and the exploration of space.

A5.54 The proposed order will allow operators of ROES who wish to apply for grants of RSA to do so, and thus allow us to take their receivers into account in our spectrum assignment processes. As a consequence of the order, those operators of other services in the bands concerned have the assurance that Ofcom can limit the number of grants in order to minimise the risk of interference and ensure efficient use of spectrum.

A5.55 Although existing licensed fixed link operators may see an increase in competition for use of frequencies, the impact is expected to be low because the demand for use of the frequency bands by ROES is likely to be low.

A5.56 We do not consider that our decision to make this order will have any material cost implications for the voluntary sector.

The preferred option

A5.57 Although difficult to quantify, we consider that the benefits of making the proposed order outweigh the costs. Our preferred option is therefore to make the proposed order.

Equality Impact Assessment

A5.58 Ofcom is separately required by statute to assess the potential impact of all our functions, policies, projects and practices on the following equality groups: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation. Equality Impact Assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

A5.59 We have not identified any particular impact of our proposals in relation to the identified equality groups. Specifically, we do not consider the impact of the proposals in this consultation to be to the detriment of any particular group within society. Nor have we seen the need to carry out separate EIAs in relation to the additional equality groups in Northern Ireland: religious belief, political opinion and dependants. This is because we anticipate that our proposals will not have a differential impact in Northern Ireland compared to consumers in general.

Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2015

Regulatory impact assessment

Issued

March 2015

Impact Assessment

Introduction

A5.60 Ofcom acts consistently with Government practice that, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") should be undertaken.

A5.61 The analysis in this document, and set out more fully in the consultation documents and statements referred to below, is an impact assessment relating to the Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2015 (the "regulations").

A5.62 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Communications Act 2003 (the "Act"), which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

A5.63 In the present case, as the impact of the policy decisions that will be given effect by the proposed regulations has already been assessed in other documents referred to, a separate assessment for the regulations may not strictly be necessary. We nevertheless include these annexes / assessments, as a matter of good practice.

A5.64 Section 18 of the WT Act prescribes the circumstances relevant for a grant of Recognised Spectrum Access (RSA), namely:

i) a person is proposing to use or to continue to use a station or apparatus for wireless telegraphy;

ii) the circumstances of the use are circumstances specified for the purposes of that section in regulations made by Ofcom;

iii) that use does not require a wireless telegraphy licence but will involve the emission of electromagnetic energy with a view to the reception of anything at places in the United Kingdom or in the territorial waters adjacent to the United Kingdom; and

iv) for the purposes of that section it is immaterial whether the emissions are from a place within the United Kingdom or from a place outside the United Kingdom.

A5.65 The purpose of the introduction of RSA is to provide a mechanism to give formal recognition to receive-only radio services and to complement licensing by providing an alternative form of spectrum holding that can be made tradable.

A5.66 Receive only satellite earth stations (ROES) that may currently operate in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz currently do so without being taken into account in Ofcom's assignment process.

A5.67 Ofcom carried out a RIA for the Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2011[14], which introduced charges for grants of RSA for ROES operating within the bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz. The proposed regulations would amend these regulations in order to extend charges for grants of RSA for ROES to the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

A5.68 Ofcom consulted[15], and is today publishing its decisions, on the policy behind the principal of introducing grants of RSA for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz, including the use of AIP.

A5.69 In consulting on and making these decisions we exercised the following powers and met the following duties.

The citizen and/or consumer interest

A5.70 Our principal duty under section 3 of the Act is to further the interests of citizens in relation to communications matters; and of consumers in relevant markets, where appropriate by promoting competition. We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. We must, in particular, secure the optimal use for wireless telegraphy of spectrum and have regard to the principle under which all regulatory activities should be targeted only at cases in which action is needed.

A5.71 In proposing these regulations we have considered the wider impact beyond immediate stakeholders in the radiocommunications sectors. We believe that the proposals will be of benefit to consumers and citizens by providing an assurance that valuable information and services can be provided in an environment where protection from interference to ROES is available. The information disseminated to ROES by space stations and satellites in the subject frequency bands is used to provide a diverse set of societal benefits including weather forecasting, climate and disaster monitoring, and also to further human endeavors such as mapping, population monitoring and the exploration of the universe.

A5.72 The introduction of charges for grants of RSA for ROES that is based on AIP is equitable where the bands are shared with other services whose fees are also AIP based.

Ofcom's policy objective

A5.73 We have a number of duties under section 3 of the WT Act. These include having regard when carrying out our radio spectrum functions to:

i) the extent that spectrum is available for use; and

[14] See Annex 1.1 attached to Ofcom's statement of 30 November 2011 entitled 'Decision to make the Regulations for Recognised Spectrum Access (RSA) for Receive Only Earth Stations in the Bands 1690 – 1710 MHz, 3600 – 4200 MHz, and 7750 – 7850 MHz': http://stakeholders.ofcom.org.uk/binaries/consultations/rsa-earth-stations/statement/statement.pdf

[15] See Ofcom's consultation document of 11 September 2014, entitled 'Recognised Spectrum Access for Satellite Stations': http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/.

ii) the desirability of promoting the efficient management and use of the spectrum for wireless telegraphy.

A5.74 The proposed regulations are intended to allow Ofcom to charge users for grants of RSA for ROES to provide incentives to use the radio spectrum efficiently.

Options considered

A5.75 The options available to us in relation to charges for grants of RSA for ROES in the subject frequency bands are as follows:

- charge fees that are based on a comprehensive fee review of the relevant frequency bands and associated users; or
- introduce the proposed regulations setting out charges that correspond to those that already apply to other associated spectrum users.

Analysis of the different options

A5.76 A full analysis of these two options was provided in the September 2014 Consultation and also in Section 4 and Annex 7 of this document.

A5.77 Ofcom is currently undertaking a separate review of fees for fixed links and satellite earth stations which will consider the bands in which RSA for ROES is available. Until that review is complete, we are unable to consider the implementation of its findings. If we were to wait until that review was complete, we would have to delay the introduction of RSA in the subject frequency bands, which would postpone the associated benefits.

A5.78 Charging fees based on those that are paid by existing users of the frequency bands is equitable and ensures that there are equivalent incentives for all users to make efficient use of the spectrum.

A5.79 As RSA for ROES is voluntary, those operators who wish to continue to operate in the subject frequency bands without applying for, and paying for, a grant of RSA can continue to do so on a non-protected basis.

Costs to Ofcom and the public sector

A5.80 There are one-off administrative costs associated with making Statutory Instruments. We consider these implementation costs to be low. Ofcom would incur little additional cost as a result of this proposal. The framework for granting RSA for ROES has already been set up in relation to other frequency bands and including ROES operating in two additional frequency bands within the framework should require little additional cost.

Cost to business, including small business and the voluntary sector

A5.81 The business sectors most likely to be affected are operators of ROES involved in monitoring the natural environment of the earth and the exploration of space.

A5.82 The proposed regulations will ensure that operators of ROES who obtain grants of RSA pay fees that are equivalent to those already paid by other users of the subject frequency bands.

A5.83 We do not consider that our decision to make these regulations will have any material cost implications for the voluntary sector.

The preferred option

A5.84 Although difficult to quantify, we consider that the benefits of making the proposed regulations outweigh the costs. Our preferred option is therefore to make the proposed regulations.

Equality Impact Assessment

A5.85 Ofcom is separately required by statute to assess the potential impact of all our functions, policies, projects and practices on the following equality groups: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation. Equality Impact Assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

A5.86 We have not identified any particular impact of our proposals in relation to the identified equality groups. Specifically, we do not consider the impact of the proposals in this consultation to be to the detriment of any particular group within society. Nor have we seen the need to carry out separate EIAs in relation to the additional equality groups in Northern Ireland: religious belief, political opinion and dependants. This is because we anticipate that our proposals will not have a differential impact in Northern Ireland compared to consumers in general.

Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) Regulations 2015

Regulatory impact assessment

Issued

March 2015

Impact Assessment

Introduction

A5.87 Ofcom acts consistently with Government practice that, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") should be undertaken.

A5.88 The analysis in this document, and set out more fully in the consultation documents and statements referred to below, is an impact assessment relating to the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) Regulations 2015 (the "regulations").

A5.89 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Communications Act 2003 (the "Act"), which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

A5.90 In the present case, as the impact of the policy decisions that will be given effect by the proposed regulations has already been assessed in other documents referred to, a separate assessment for the regulations may not strictly be necessary. We nevertheless include these annexes / assessments, as a matter of good practice.

A5.91 Section 18 of the WT Act prescribes the circumstances relevant for a grant of Recognised Spectrum Access (RSA), namely:

i) a person is proposing to use or to continue to use a station or apparatus for wireless telegraphy;

ii) the circumstances of the use are circumstances specified for the purposes of that section in regulations made by Ofcom;

iii) that use does not require a wireless telegraphy licence but will involve the emission of electromagnetic energy with a view to the reception of anything at places in the United Kingdom or in the territorial waters adjacent to the United Kingdom; and

iv) for the purposes of that section it is immaterial whether the emissions are from a place within the United Kingdom or from a place outside the United Kingdom.

A5.92 The purpose of the introduction of RSA is to provide a mechanism to give formal recognition to receive-only radio services and to complement licensing by providing an alternative form of spectrum holding that can be made tradable.

A5.93 Receive only satellite earth stations (ROES) that may currently operate in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz currently do so without being taken into account in Ofcom's assignment process.

A5.94 Ofcom carried out a RIA for the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) (No. 2) Regulations 2011[16], which allowed trading of grants of RSA for ROES operating within the bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz. The proposed regulations would amend these regulations in order to allow trading of grants of RSA for ROES operating in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

A5.95 Ofcom consulted[17], and is today publishing its decisions, on the policy behind the principal of introducing grants of RSA for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz, including the use of AIP.

A5.96 In consulting on and making these decisions we exercised the following powers and met the following duties.

The citizen and/or consumer interest

A5.97 Our principal duty under section 3 of the Act is to further the interests of citizens in relation to communications matters; and of consumers in relevant markets, where appropriate by promoting competition. We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. We must, in particular, secure the optimal use for wireless telegraphy of spectrum and have regard to the principle under which all regulatory activities should be targeted only at cases in which action is needed.

A5.98 In proposing these regulations we have considered the wider impact beyond immediate stakeholders in the radiocommunications sectors. We believe that the proposals will be of benefit to consumers and citizens by providing an assurance that valuable information and services can be provided in an environment where protection from interference to ROES is available. The information disseminated to ROES by space stations and satellites in the subject frequency bands is used to provide a diverse set of societal benefits including weather forecasting, climate and disaster monitoring, and also to further human endeavors such as mapping, population monitoring and the exploration of the universe.

Ofcom's policy objective

A5.99 We have a number of duties under section 3 of the WT Act. These include having regard when carrying out our radio spectrum functions to:

i) the extent that spectrum is available for use; and

ii) the desirability of promoting the efficient management and use of the spectrum for wireless telegraphy.

[16] See Annex 1.1 attached to Ofcom's statement of 30 November 2011 entitled 'Decision to make the Regulations for Recognised Spectrum Access (RSA) for Receive Only Earth Stations in the Bands 1690 – 1710 MHz, 3600 – 4200 MHz, and 7750 – 7850 MHz': http://stakeholders.ofcom.org.uk/binaries/consultations/rsa-earth-stations/statement/statement.pdf

[17] See Ofcom's consultation document of 11 September 2014, entitled 'Recognised Spectrum Access for Satellite Stations': http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/.

A5.100 The proposed regulations are intended to allow recipients of grants of RSA for ROES operating within the 7850 – 7900 MHz and 25.5 – 26.5 GHz frequency bands to trade their grants of RSA.

Options considered

A5.101 The options available to us in relation to the trading of grants of RSA for ROES in the subject frequency bands are as follows:

- do nothing; or
- introduce the proposed regulations.

Analysis of the different options

A5.102 Some analysis of these two options was provided in the September 2014 Consultation and also in Section 4 and Annex 7 of this document.

A5.103 If we do nothing, there will be little opportunity for higher value uses of spectrum to gain access to spectrum being used by ROES.

A5.104 The proposed regulations maximise benefits to society by ensuring the spectrum is made available to the highest value user. This will promote efficient use of spectrum.

Costs to Ofcom and the public sector

A5.105 There are one-off administrative costs associated with making Statutory Instruments. We consider these implementation costs to be low. Ofcom would incur little additional cost as a result of this proposal. The framework for granting RSA for ROES has already been set up in relation to other frequency bands and including ROES operating in two additional frequency bands within the framework should require little additional cost.

Cost to business, including small business and the voluntary sector

A5.106 The business sectors most likely to be affected are fixed link operators as well as those involved in monitoring the natural environment of the earth and the exploration of space.

A5.107 We consider that the costs to business would be proportionate, because the costs of spectrum trading would only fall on those who traded and for whom the benefit of the spectrum trade should exceed the costs anyway.

A5.108 In summary, Ofcom considers that the benefits of allowing trading for wireless telegraphy licences in the subject bands are likely to outweigh the costs.

A5.109 We do not consider that our decision to make these regulations will have any material cost implications for the voluntary sector.

The preferred option

A5.110 We believe that the proposed regulations will improve spectrum efficiency by allowing those in receipt of a grant of RSA for ROES to assess the value of that grant against a market value for the spectrum and location concerned. It facilitates a trade when another operator puts a higher value on the spectrum than that perceived by the recipient of the RSA grant.

A5.111 Although difficult to quantify, we consider that the benefits of making the proposed regulations outweigh the costs. Our preferred option is therefore to make the proposed regulations.

Equality Impact Assessment

A5.112 Ofcom is separately required by statute to assess the potential impact of all our functions, policies, projects and practices on the following equality groups: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation. Equality Impact Assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

A5.113 We have not identified any particular impact of our proposals in relation to the identified equality groups. Specifically, we do not consider the impact of the proposals in this consultation to be to the detriment of any particular group within society. Nor have we seen the need to carry out separate EIAs in relation to the additional equality groups in Northern Ireland: religious belief, political opinion and dependants. This is because we anticipate that our proposals will not have a differential impact in Northern Ireland compared to consumers in general.

Wireless Telegraphy (Register) (Amendment) Regulations 2015

Regulatory impact assessment

Issued

March 2015

Impact Assessment

Introduction

A5.114 Ofcom acts consistently with Government practice that, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") should be undertaken.

A5.115 The analysis in this document, and set out more fully in the consultation documents and statements referred to below, is an impact assessment relating to the Wireless Telegraphy (Register) (Amendment) Regulations 2015 (the "regulations").

A5.116 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Communications Act 2003 (the "Act"), which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

A5.117 In the present case, as the impact of the policy decisions that will be given effect by the proposed regulations has already been assessed in other documents referred to, a separate assessment for the regulations may not strictly be necessary. We nevertheless include these annexes / assessments, as a matter of good practice.

A5.118 Section 18 of the WT Act prescribes the circumstances relevant for a grant of Recognised Spectrum Access (RSA), namely:

i) a person is proposing to use or to continue to use a station or apparatus for wireless telegraphy;

ii) the circumstances of the use are circumstances specified for the purposes of that section in regulations made by Ofcom;

iii) that use does not require a wireless telegraphy licence but will involve the emission of electromagnetic energy with a view to the reception of anything at places in the United Kingdom or in the territorial waters adjacent to the United Kingdom; and

iv) for the purposes of that section it is immaterial whether the emissions are from a place within the United Kingdom or from a place outside the United Kingdom.

A5.119 The purpose of the introduction of RSA is to provide a mechanism to give formal recognition to receive-only radio services and to complement licensing by providing an alternative form of spectrum holding that can be made tradable.

A5.120 Receive only satellite earth stations (ROES) that may currently operate in the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz currently do so without being taken into account in Ofcom's assignment process.

A5.121 Ofcom carried out a RIA for the Wireless Telegraphy (Register) (Amendment) (No. 3) Regulations 2011[18], which introduced RSA for ROES operating within the bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz. The proposed regulations would amend these regulations in order to extend RSA to the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz.

A5.122 Ofcom consulted[19], and is today publishing its decisions, on the policy behind the principal of introducing grants of RSA for ROES operating within the frequency bands 7850 – 7900 MHz and 25.5 – 26.5 GHz, including the use of AIP.

A5.123 In consulting on and making these decisions we exercised the following powers and met the following duties.

The citizen and/or consumer interest

A5.124 Our principal duty under section 3 of the Act is to further the interests of citizens in relation to communications matters; and of consumers in relevant markets, where appropriate by promoting competition. We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. We must, in particular, secure the optimal use for wireless telegraphy of spectrum and have regard to the principle under which all regulatory activities should be targeted only at cases in which action is needed.

A5.125 In proposing these regulations we have considered the wider impact beyond immediate stakeholders in the radiocommunications sectors. We believe that the proposals will be of benefit to consumers and citizens by providing an assurance that valuable information and services can be provided in an environment where protection from interference to ROES is available. The information disseminated to ROES by space stations and satellites in the subject frequency bands is used to provide a diverse set of societal benefits including weather forecasting, climate and disaster monitoring, and also to further human endeavors such as mapping, population monitoring and the exploration of the universe.

Ofcom's policy objective

A5.126 We have a number of duties under section 3 of the WT Act. These include having regard when carrying out our radio spectrum functions to:

i) the extent that spectrum is available for use; and

ii) the desirability of promoting the efficient management and use of the spectrum for wireless telegraphy.

A5.127 The proposed regulations facilitate the publication of basic technical parameters concerning grants of RSA for ROES in the subject frequency bands. The availability of this information will facilitate greater spectrum efficiency and reduce Ofcom's

[18] See Annex 1.1 attached to Ofcom's statement of 30 November 2011 entitled 'Decision to make the Regulations for Recognised Spectrum Access (RSA) for Receive Only Earth Stations in the Bands 1690 – 1710 MHz, 3600 – 4200 MHz, and 7750 – 7850 MHz': http://stakeholders.ofcom.org.uk/binaries/consultations/rsa-earth-stations/statement/statement.pdf

[19] See Ofcom's consultation document of 11 September 2014, entitled 'Recognised Spectrum Access for Satellite Stations': http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/.

workload by allowing other operators to consider the potential impact of grants on their own deployment plans. The information will also facilitate spectrum trading.

Options considered

A5.128 The options available to us in relation to the publication of information about grants of RSA for ROES in the WT Register are as follows:

- do nothing; or
- introduce the proposed regulations.

Analysis of the different options

A5.129 Some analysis of these two options was provided in the September 2014 Consultation and also in Section 4 and Annex 7 of this document.

A5.130 If we do nothing, there will be no information available to other existing and potential users of the subject frequency bands.

A5.131 By making the proposed regulations, information about grants of RSA for ROES will be available to those who might otherwise commit to investment in use of the subject frequency bands that would be impacted by the grant of RSA. The proposed regulations will also provide information to those parties who may be considering spectrum trades.

Costs to Ofcom and the public sector

A5.132 There are one-off administrative costs associated with making Statutory Instruments. We consider these implementation costs to be low. Ofcom would incur little additional cost as a result of this proposal. The framework for granting RSA for ROES has already been set up in relation to other frequency bands and including ROES operating in two additional frequency bands within the framework should require little additional cost.

Cost to business, including small business and the voluntary sector

A5.133 The business sectors most likely to be affected are fixed link operators as well as those involved in monitoring the natural environment of the earth and the exploration of space.

A5.134 We do not consider that our decision to publish information about grants of RSA for ROES will have any material cost implications for businesses or the voluntary sector.

The preferred option

A5.135 Although difficult to quantify, we consider that the benefits of including the subject frequency bands within the WT Register are likely to outweigh the costs. The benefits could be significant in terms of improving the effectiveness of potential spectrum trades and the costs would be minimal because the register has already been established.

Equality Impact Assessment

A5.136 Ofcom is separately required by statute to assess the potential impact of all our functions, policies, projects and practices on the following equality groups: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation. Equality Impact Assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

A5.137 We have not identified any particular impact of our proposals in relation to the identified equality groups. Specifically, we do not consider the impact of the proposals in this consultation to be to the detriment of any particular group within society. Nor have we seen the need to carry out separate EIAs in relation to the additional equality groups in Northern Ireland: religious belief, political opinion and dependants. This is because we anticipate that our proposals will not have a differential impact in Northern Ireland compared to consumers in general.

Annex 6

List of respondents to the consultation

A6.1 Ofcom received eight responses to the September 2014 Consultation, one of which was submitted to us on a confidential basis. The seven non-confidential responses can be found on our website[20]. The names of the seven non-confidential respondents are shown below.

Non-confidential responses

Alcatel-Lucent

Avanti Communications plc

European Space Agency

Met Office

O3b Limited

techUK

UK Space Agency

[20] http://stakeholders.ofcom.org.uk/consultations/recognised-spectrum-access-receive-only-earth-stations/?showResponses=true

Annex 7

Stakeholder responses to the consultation

A7.1 Section 3 of this document provides an assessment of the general comments raised by respondents to the September 2014 Consultation. This Annex provides an analysis of some other more specific stakeholder comments that are not addressed in Section 3.

Stakeholder comment	**Ofcom response**
Alcatel-Lucent and ESA made reference to footnote 5.536B of the Radio Regulations and questioned whether the introduction of RSA in the band 25.5 – 26.5 GHz in the UK was consistent with this footnote. Alcatel-Lucent argued that the grant of RSA to ROES stations operating in the EESS service in this band would, in practice, result in a change of status of these stations with regard to the Radio Regulations.	We recognise that one potential interpretation of footnote 5.536B of the Radio Regulations might be that it specifies the conditions for sharing within a given country, e.g. that UK-based earth stations shall not claim protection from, or constrain the use of, UK-based stations in the fixed and mobile services. However, we consider that such interpretation would not be in line with the purpose of the Radio Regulations, which are intended to define the rights and obligations of spectrum use between different countries, while recognising the sovereign right of countries to manage and use spectrum, within their own borders, the way they wish to without causing interference to other countries' use. Ofcom will therefore need to further consider the purpose of footnote 5.536B before making a decision on whether to remove the UK's name from the footnote. Such a decision would not affect our ability to implement RSA for ROES in the UK.

Stakeholder comment	Ofcom response
ESA asked Ofcom to clarify if the bands 2200 – 2290 MHz, 8025 – 8400 MHz and 8400 – 8500 MHz are, or are planned to be, licensed for receiving Earth stations and therefore coordination would be performed with terrestrial systems.	The 2200 – 2290 MHz (space-to-Earth) band is already available for licensed use by earth stations in the UK if used in conjunction with the 2025 – 2110 MHz (Earth-to-space) band and if operating in either the earth exploration-satellite service or space research service. In accordance with footnotes UK4.43 and 4.44 of the UKFAT, management responsibility for the space operation service in these bands rests with the MoD. Ofcom does not have plans to introduce RSA for ROES in the 2200 – 2290 MHz band. Although the band can be used by ROES, such use would not be subject to formal recognition by Ofcom. Management responsibility for the 8025 – 8400 MHz band rests with the MoD. We have no plans to introduce RSA for ROES in this band. The 8400 – 8500 MHz band can be used by receive-only earth stations but such use is not subject to formal recognition by Ofcom. Ofcom does not have plans to introduce RSA for receive-only earth stations in this band.
Met Office agreed with the methodology for charging in the 7850 – 7900 MHz band. However, it believes that as AIP charging is only considered up to 15.7 GHz, only an administration fee should be charged for 25.5 – 26.5 GHz to maintain consistency.	In general, the application of AIP-based fees is done on a band-by-band basis and depends on the specific circumstances of each band, including congestion and opportunity cost. Our proposal to charge AIP-based fees for RSA for ROES in the 25.5 – 26.5 GHz band is to reflect the opportunity cost of the band, which is linked to the fees that other users of the band, namely fixed links, already pay for licences. In this context, we do not consider it appropriate to apply different charging principles for different users of the same frequency band because we think that doing so could potentially distort the choice of frequency band that a user makes. It would also raise issues of equity of treatment between different groups of spectrum users.

Stakeholder comment	Ofcom response
UKSA said that in the context of public sector spectrum sharing, it would not expect to be double charged for RSA and AIP. Where access is covered by RSA, UKSA assumes that AIP will not be chargeable and vice versa.	Section 28 of the WT Act allows the Secretary of State to make payments for the operation by the Crown of wireless telegraphy apparatus or in respect of any grant of RSA made to the Crown. Sums that Ofcom receives for grants of RSA for ROES in a given frequency band are deducted from any payments made by the Secretary of State in respect of the same band.
O3b wished to know if several ROES that have overlapping coordination zones would be treated separately where fees are levied individually or if they would be consolidated together for a reduced fee.	As proposed in the September 2014 Consultation, we intend to apply RSA fees in a way that encourages geographic co-location of ROES and hence minimises the impact on other spectrum users. This would be achieved by charging fees based on the total bandwidth applied for at a given site, irrespective of the number of receive-only terminals. A site is to be defined as any location within 500 metres of a central location specified by the applicant. ROES located at different sites would not be consolidated together for fee charging purposes. This approach is consistent with the fees structure that applies to licensed Permanent Earth Stations and RSA for ROES in other frequency bands.
ESA assumed that no fees will be levied on ESA for the grant of RSA for ROES in accordance with Article 6, Point 3 of the "Agreement between ESA and the United Kingdom concerning the ESA premises in the United Kingdom", which states: "The agency shall be exempt from the payment of fees for the use of radio spectrum."	We note that the wording of the latest draft hosting agreement between ESA and UK government is different to that quoted by ESA. In any case, the fee charged for RSA for ROES operated by ESA should be met by ESA or the relevant UK government department in accordance with the terms of the hosting agreement.

Stakeholder comment	Ofcom response
UKSA noted that the band 25.5 – 26.5 GHz is also allocated to short range devices under two EU Decisions, and said that it is not clear how ROES will be protected from this use.	We note that European Commission Decision 2005/50/EC (amended in 2011) concerns the harmonisation of short range radars (SRR) in the range 24 GHz (± 2.5 GHz). These vehicle-mounted devices emit extremely low levels of power and hence there is very low probability that they will interfere with other users of the spectrum. They also operate on a non-interference, non-protected basis. To limit the penetration of devices on the market, the EC Decision places a cut-off date beyond which the band shall cease to be available for new installations. For these reasons we believe that ROES will be able to operate in the 25.5 – 26.5 GHz band without any significant risk of interference from SRRs.

Annex 8

Draft Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Regulations 2015

STATUTORY INSTRUMENTS

2015 No.

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Regulations 2015

Made - - - -	***
Coming into force - -	***

The Office of Communications ("OFCOM") make the following Regulations in exercise of the powers conferred by section 18(1)(b), section 122(7) and Schedule 2, paragraph 1 of the Wireless Telegraphy Act 2006([21]) (the "Act").

Before making the Regulations OFCOM have given notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act and have considered the representations made to them before the time specified in the notice in accordance with section 122(4)(c) of the Act.

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Stations) (Amendment) Regulations 2015 and shall come into force on [0000].

Amendment of the Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Stations) Regulations 2011

2. The Wireless Telegraphy (Recognised Spectrum Access for Satellite Receive-Only Stations) Regulations 2011 (the "principal Regulations") are amended as follows.

([21]) 2006 c.36

Amendments to regulation 2

3. In regulation 2 of the principal Regulations—

(a) after paragraph (a), insert—

"(b) "earth exploration satellite service" means a radio communications service between satellites in space and fixed wireless telegraphy stations on the ground used for earth observation purposes";

(b) renumber paragraph (b) as (c) and omit "and" at the end of that paragraph;

(c) renumber paragraph (c) as (d);

(d) at the end of paragraph (d) as so renumbered, for the full stop substitute a semi-colon and insert "and"; and

(e) after paragraph (d) as so renumbered, insert—

"(e) "space research service" means a radio communications service between spacecraft or other objects in space and fixed wireless telegraphy stations on the ground used for scientific or technological research purposes."

Amendment to regulation 3

4. In regulation 3 of the principal Regulations—

(a) at the end of sub-paragraph (b)(i), omit "or";

(b) at the end of sub-paragraph (b)(ii), for the full stop substitute a semi-colon and insert "or"; and

(c) after sub-paragraph (b)(ii), insert—

"(iii) within the frequency band listed in Schedule 3 to provide either an earth exploration satellite service or a space research service."

Amendment to Schedule 2

5. In Schedule 2 to the principal Regulations, for "7750–7850 Megahertz" substitute "7750–7900 Megahertz".

Insertion of Schedule 3

6. After Schedule 2 to the principal Regulations, insert the following Schedule 3—

"SCHEDULE 3

Regulation 3

Frequency band for earth exploration satellite service or space research service

Frequency band
25.5–26.5 Gigahertz"

Annex 9

Draft Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Order 2015

STATUTORY INSTRUMENTS

2015 No. 0000

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Earth Stations) (Amendment) Order 2015

Made	- - - -	***
Coming into force	- -	***

The Office of Communications ("OFCOM") make the following Order in exercise of the powers conferred by section 29(1) to (3) of the Wireless Telegraphy Act 2006([22]) (the "Act").

Before making the Order OFCOM have given notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act and have considered the representations made to them before the time specified in the notice in accordance with section 122(4)(c) of the Act.

Citation and commencement

1. This Order may be cited as the Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Stations) (Amendment) Order 2015 and shall come into force on [0000].

([22]) 2006 c.36

Amendment of the Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Stations) Order 2015

2. The Wireless Telegraphy (Limitation of Number of Grants of Recognised Spectrum Access for Satellite Receive-Only Stations) Order 2011 (the "principal Order") is amended as follows.

Amendments to article 2

3. In article 2 of the principal Order—

(a) before paragraph (a), insert—

"(a) "earth exploration satellite service" means a radio communications service between satellites in space and fixed wireless telegraphy stations on the ground used for earth observation purposes;"

(b) renumber the existing paragraph (a) as (b) and omit "and" at the end of that paragraph;

(c) renumber the existing paragraph (b) as (c), for the full stop at the end of that paragraph substitute a semi-colon and insert "and"; and

(d) after paragraph (c) as so renumbered, insert—

"(d) "space research service" means a radio communications service between spacecraft or other objects in space and fixed wireless telegraphy stations on the ground used for scientific or technological research purposes."

Amendment to article 3

4. In article 3(b) of the principal Order—

(a) at the end of sub-paragraph (b)(i), omit "or";

(b) at the end of sub-paragraph (b)(ii), for "and" substitute "or"; and

(c) after sub-paragraph (b)(ii), insert—

"(iii) within the frequency band listed in Schedule 3 to provide either an earth exploration satellite service or a space research service; and"

Amendment to Schedule 2

5. In Schedule 2 to the principal Order, for "7750–7850 Megahertz" substitute "7750–7900 Megahertz".

Insertion of Schedule 3

6. After Schedule 2 to the principal Order, insert the following Schedule 3—

"SCHEDULE 3 Article 2

Frequency band for earth exploration satellite services or space research services

Frequency band
25.5–26.5 Gigahertz"

Annex 10

Draft Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2015

STATUTORY INSTRUMENTS

2015 No. 0000

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2015

Made - - - -	***
Coming into force - -	***

The Office of Communications ("OFCOM") make the following Regulations in exercise of the powers conferred by sections 21, 22(2) and 22(3) of the Wireless Telegraphy Act 2006([23]) (the "Act").

Before making the Regulations, OFCOM have given notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act and have considered the representations made to them before the time specified in the notice in accordance with section 122(4)(c) of the Act.

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Recognised Spectrum Access Charges) (Amendment) Regulations 2015 and shall come into force on [0000].

Amendment of the Wireless Telegraphy (Recognised Spectrum Access Charges) Regulations 2007

2. The Wireless Telegraphy (Recognised Spectrum Access Charges) Regulations 2007 (the "principal Regulations") are amended as follows.

Amendments to regulation 8(b)

3.—(1) Regulation 8(b) of the principal Regulations is amended as follows.

(2) Omit the word "and" at the end of sub-paragraph (ii).

([23]) 2006 c.36

(3) In sub-paragraph (iii)—

(a) for "7750–7850 MHz", substitute "7750–7900 MHz"; and

(b) at the end of the paragraph, for the full stop substitute a semi-colon and insert "and".

(4) After sub-paragraph (iii), insert—

"(iv) in the case of a grant of recognised spectrum access in respect of the use of the frequency band 25.5–26.5 GHz—

(aa) if the grant is for receiving a radio communications service from a geostationary satellite, multiplying the relevant sum in pounds sterling set out in Table 4 of Schedule 2 (as determined on the basis of the recognised interference level specified in that grant) by each whole MHz of radio frequency which is recognised in that grant; and

(bb) if the grant is for receiving a radio communications service from a non-geostationary spacecraft or other object in space (including a satellite), multiplying the relevant sum in pounds sterling set out in Table 5 of Schedule 2 (as determined on the basis of the recognised interference level specified in that grant) by each whole MHz of radio frequency which is recognised in that grant. ".

Amendment to Part 5 of Schedule 1

4. In Part 5 of Schedule 1 to the principal Regulations—

(a) for "7750–7850 MHz", substitute "7750–7900 MHz"; and

(b) after "7750–7900 MHz", as amended, insert—

"25.5–26.5 GHz".

Amendment to Schedule 2

5. For Schedule 2 to the principal Regulations, substitute the following Schedule—

"SCHEDULE 2 Regulation 8

Table 1

Frequency band 1690–1710 MHz

	Recognised Interference Level		
	–156 dBW/MHz to less than –146 dBW/MHz	*–146 dBW/MHz to less than –136 dBW/MHz*	*–136 dBW/MHz or higher*
Sum/MHz	£63	£37	£19

Table 2

Frequency band 3600–4200 MHz

	Recognised Interference Level			
	–161 dBW/MHz to less than –159 dBW/MHz	*–159 dBW/MHz to less than –149 dBW/MHz*	*–149 dBW/MHz to less than –139 dBW/MHz*	*–139 dBW/MHz or higher*
Sum/MHz	£20	£17	£9	£4

Table 3

Frequency band 7750–7900 MHz

	Recognised Interference Level		
	–156 dBW/MHz to less than –146 dBW/MHz	*–146 dBW/MHz to less than –136 dBW/MHz*	*–136 dBW/MHz or higher*
Sum/MHz	£46	£33	£23

Table 4

Frequency band 25.5–26.5 GHz (geostationary)

	Recognised Interference Level		
	–159 dBW/MHz to less than –149 dBW/MHz	*–149 dBW/MHz to less than –139 dBW/MHz*	*–139 dBW/MHz or higher*
Sum/MHz	£4	£2	£1

Table 5

Frequency band 25.5–26.5 GHz (non-geostationary)

	Recognised Interference Level		
	–159 dBW/MHz to less than –149 dBW/MHz	*–149 dBW/MHz to less than –139 dBW/MHz*	*–139 dBW/MHz or higher*
Sum/MHz	£20	£10	£5”

Annex 11

Draft Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) Regulations 2015

STATUTORY INSTRUMENTS

2015 No. 0000

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) Regulations 2015

Made - - - -	***
Coming into force - -	***

The Office of Communications ("OFCOM") make the following Regulations in exercise of the powers conferred by section 30(1) to (3) and section 122(7) of the Wireless Telegraphy Act 2006([24]) (the "Act").

Before making the Regulations OFCOM have given notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act and have considered the representations made to them before the time specified in the notice in accordance with section 122(4)(c) of the Act.

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) (Amendment) Regulations 2015 and shall come into force on [0000].

Amendment of the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) Regulations 2009

2. The Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) Regulations 2009 (the "principal Regulations") are amended as follows.

Amendment of Part 2 of Schedule 3

3. In the table in Part 2 of Schedule 3 to the principal Regulations, for "7750–7850 Megahertz" substitute "7750–7900 Megahertz".

([24]) 2006 c.36

Insertion of Part 3 in Schedule 3

4. In Schedule 3 to the principal Regulations, after Part 2 insert the following Part 3—

"PART 3

Column 1	*Column 2*
Class of Licence or RSA	*Frequency Band*
Receive-Only Earth Stations (Earth Exploration Satellite Service) Receive-Only Earth Stations (Space Research Service)"	25.5–26.5 Gigahertz

Annex 12

Draft Wireless Telegraphy (Register) (Amendment) Regulations 2015

STATUTORY INSTRUMENTS

2015 No. 0000

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Register) (Amendment) Regulations 2015

Made - - - -	***
Coming into force - -	***

The Office of Communications ("OFCOM") make the following Regulations in exercise of the powers conferred by section 31(1) and (2) and section 122(7) of the Wireless Telegraphy Act 2006([25]) (the "Act").

Before making the Regulations OFCOM have given notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act and have considered the representations made to them before the time specified in the notice in accordance with section 122(4)(c) of the Act.

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Register) (Amendment) Regulations 2015 and shall come into force on [0000].

Amendment of the Wireless Telegraphy (Register) Regulations 2012

2.—(1) In Column 1 of Part 6 of Schedule 2 to the Wireless Telegraphy (Register) Regulations 2012 (the "principal Regulations"), insert, at the end of the column, after "Receive-Only Earth Station (Meteorological Satellite Service)"—

"Receive-Only Earth Stations (Earth Exploration Satellite Service)
Receive-Only Earth Stations (Space Research Service)".

(2) In Column 2 of Part 6 of Schedule 2 to the principal Regulations—

(a) for "7750–7850 MHz", substitute "7750–7900 MHz"; and

(b) after "23.6–24.0 GHz", insert—

([25]) 2006 c.36

“25.5–26.5 GHz”.

Annex 13

Process for granting RSA for ROES

A13.1 The process for application of a grant for RSA for ROES and subsequent grant of RSA will be similar to the current process for RSA for ROES in the frequency bands 1690 – 1710 MHz, 3600 – 4200 MHz and 7750 – 7850 MHz.

A13.2 The applicant will need to complete a form similar to OfW102, providing administrative details of the company and information regarding the ROES site and the individual ROES terminal/s for which a Grant is sought.

A13.3 Additionally, the applicant will need to complete a soft copy of an Excel spreadsheet in which the details of the site and terminal/s should be entered (this ensures that there are no data entry errors introduced by the Ofcom internal process).

A13.4 The technical information required for each site and terminal or terminals for which a grant is sought is:

- Name of terminal / antenna;
- National Grid Reference of station location;
- Site height above mean sea level (m) if known;
- The name or names of the satellite, spacecraft or other object in space from which reception is required (a separate spread sheet will have to be completed for each satellite, spacecraft or other object in space from which reception is required);
- The orbital location of the satellite, spacecraft or other object in space if geostationary;
- The antenna details; namely:

i) Antenna performance pattern;

ii) Antenna diameter (m);

iii) Antenna centre height above ground level (m);

iv) Antenna gain (dBi);

v) Antenna beamwidth (degrees);

vi) Antenna azimuth (degrees);

vii) Antenna elevation (degrees);

- Receiver system noise temperature (degK);
- The details of each ROES received signal for which the grant is sought; namely:

viii) Centre frequency of each accessible bandwidth (MHz)

ix) the commensurate accessible bandwidth (MHz);

x) polarisation of the signal;

xi) emission code of the received signal;

- The protection level range in dBW/MHz, for which the Grant is sought, if this varies from that set by the receiver input noise temperature.

A13.5 Once all details have been received, the ROES will be modelled in Ofcom's spectrum management system and the predicted long term single entry interference level into the ROES will be predicted using Ofcom's assignment data base and our implementation of Recommendation ITU-R P.452.

A13.6 This will establish the recognised interference level for which a grant may be issued. The applicant will be notified of the recognised interference level, providing them with the opportunity to adjust the requested level of protection, taking into account any local shielding.

A13.7 After the predicted interference protection level has been agreed with the applicant, a draft grant of RSA will be produced manually and the charges calculated.

A13.8 Ofcom will then issue an invoice to the applicant and after payment is received, a grant will be issued.

Annex 14

Glossary

AIP	Administered incentive pricing. A methodology used to set charges for spectrum holdings to reflect the opportunity cost.
dB	Decibel. A notation for dealing with ratios that vary over several orders of magnitude by using logarithms.
dBW	Decibel watt. The power ratio in decibels (dB) of the measured power referenced to one watt (W).
dBW/MHz	Decibel watt per megahertz. The amount of power in a bandwidth of 1 megahertz.
EESS	Earth exploration-satellite service. A satellite radiocommunication service which obtains information relating to the characteristics of the Earth and its natural phenomena from active or passive sensors on the satellite, and distributes this information to earth stations.
EIA	Equality impact assessment
GHz	Gigahertz. A unit of frequency of one billion oscillations per second.
GSO	Geostationary satellite orbit. The orbit of a satellite whose circular and direct orbit lies in the plane of the Earth's equator and which remains fixed relative to the Earth's surface.
MetSat	Meteorological-satellite service. A type of earth exploration-satellite service for meteorological purposes.
MHz	Megahertz. A unit of frequency of one million oscillations per second.
NGSO	Non-geostationary satellite orbit
RIA	Regulatory Impact Assessment
ROES	Receive-only earth station. A radio station situated on the earth which receives radio signals from one or more satellites, or other objects in space, but does not transmit.
RSA	Recognised spectrum access. RSA is a means for Ofcom to take into account, within national spectrum planning, the use of frequencies used for the reception of services that do not need to be licensed.
S.I.	Statutory Instrument
SRS	Space research service. A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.

TNR	Transfer notification register. Ofcom's online register which provides information on licences which have been traded or are in the process of being traded.
UKFAT	UK Frequency Allocation Table. Details spectrum allocations in the UK and identifies responsibilities for the management of frequency bands or services.
WT Act	Wireless Telegraphy Act 2006
WT Register	Wireless Telegraphy Register. Ofcom's online register which provides information about individual licences.