

Expanding spectrum access for fixed links in the 32 GHz band

Proposal to make additional spectrum available in the 32 GHz band for fixed links use

Consultation

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1. Overview

- 1.1 In April 2024 a national 2 x 126 MHz block of spectrum in the 32 GHz band, (“unassigned spectrum”) was returned to Ofcom.
- 1.2 This consultation sets out proposals for making this unassigned spectrum (32.445-32.571 GHz paired with 33.257-33.383 GHz) available for fixed links use on an Ofcom-managed basis.
- 1.3 Our proposals would enable fixed links operators to increase their capacity to serve more consumers and businesses with improved services. We do not consider that our proposals would adversely affect existing users of the 32 GHz band or other users of frequencies adjacent to the unassigned spectrum.

What we are proposing – in brief

We propose to make the unassigned spectrum in the 32 GHz band (32.445-32.571 GHz paired with 33.257-33.383 GHz) available for new fixed links assignments on an Ofcom-managed basis across the UK.

We plan to publish our decision later this year, together with our decision on our March 2024 proposals for the 27.5-30 GHz band

[Link to our consultation on increasing use of the 27.5-30 GHz \(“28 GHz”\) band](#)

- 1.4 In March 2024 we consulted on [future use of returned spectrum in the 28 GHz band](#), including a proposal to make some of this spectrum available for fixed links. Given that 28 GHz and 32 GHz spectrum is broadly substitutable from a fixed links perspective, we plan to review responses to this consultation alongside the 28 GHz consultation responses and publish a combined statement later this year.

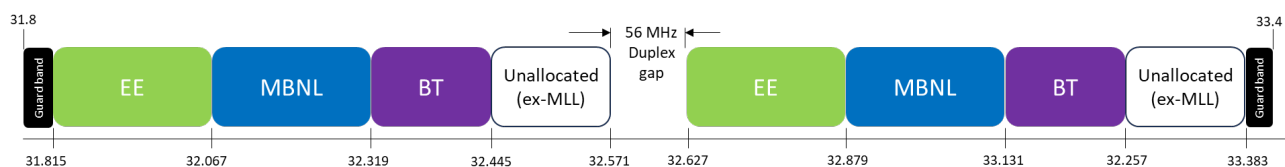
2. Introduction

- 2.1 In this consultation, we make proposals on the future use of 2 x 126 MHz of spectrum in the 32 GHz band (32.445-32.571 GHz paired with 33.257-33.383 GHz).

Background to the 32 GHz band

- 2.2 Spectrum in the 32 GHz band (31.8 – 33.4 GHz) was auctioned in 2008 on a national block-assigned¹ basis and is currently used for fixed wireless services (point-to-point fixed links).
- 2.3 The current licensees using this spectrum are shown in Figure 1.

Figure 1: Current allocations in the 32 GHz band



- 2.4 The initial 15-year licence term of 32 GHz licences ended in 2023. Following consultation in 2022, Ofcom introduced annual licence fees for continued use of these licences after the initial term ended.
- 2.5 MLL surrendered its licence for 2 x 126 MHz of spectrum in the 32 GHz band in April 2024 and the returned spectrum is currently unassigned. We are therefore considering how best to make this spectrum available for new uses.

Ofcom duties

- 2.6 Ofcom’s statutory powers and duties in relation to spectrum management are set out primarily in the Communications Act 2003 (the “2003 Act”) and the Wireless Telegraphy Act (“WT Act”).

Communications Act 2003

- 2.7 Our principal duties under the 2003 Act are to further the interests of citizens and consumers with respect to communications matters, where appropriate by promoting competition. In doing so, we are also required (among other things) to secure the optimal use of spectrum and the availability throughout the United Kingdom of a wide range of electronic communications services.
- 2.8 Our spectrum management duties require us to have regard to:
- the desirability of promoting competition in relevant markets;
 - the desirability of encouraging investment and innovation in relevant markets;

¹ Block-assigned licences provide access to a block of spectrum within a given geographic area and licensees can manage their own deployments within the block.

- c) the different needs and interests, so far as the use of the electro-magnetic spectrum for wireless telegraphy is concerned, of all persons who may wish to make use of it; and
- d) the different interests of persons in the different parts of the United Kingdom, of the different ethnic communities within the United Kingdom and of persons living in rural and in urban areas.

Wireless Telegraphy Act

- 2.9 We permit the use of the radio spectrum by granting wireless telegraphy licences under the WT Act. It is unlawful and an offence to install or use wireless telegraphy apparatus without holding a licence granted by Ofcom, unless the use of such equipment is exempted.
- 2.10 In carrying out our spectrum functions we have a duty under section 3 of the Act to have regard in particular to:
 - a) the extent to which the spectrum is available for use, or further use, for wireless telegraphy;
 - b) the demand for use of that spectrum for wireless telegraphy; and
 - c) the demand that is likely to arise in future for such use.
- 2.11 We also have a duty to have regard to the desirability of promoting:
 - a) the efficient management and use of the spectrum for wireless telegraphy;
 - b) the economic and other benefits that may arise from the use of wireless telegraphy;
 - c) the development of innovative services; and
 - d) competition in the provision of electronic communications services.
- 2.12 Section 8(3B) of the WT Act says the terms, provisions and limitations specified in the licences must be:
 - a) objectively justifiable in relation to the wireless telegraphy stations or wireless telegraphy apparatus to which they relate;
 - b) not such as to discriminate unduly against persons or against a particular description of persons;
 - c) proportionate to what they are intended to achieve; and
 - d) transparent in relation to what they are intended to achieve.

3. Our proposal

Summary of our proposals

- 3.1 In this consultation we are proposing to:
- make unassigned spectrum in the 32 GHz band available for new fixed links assignments on an Ofcom-managed basis; and
 - enable this by opening 28 MHz channels and one or more 56 MHz channels for new assignments.

Our proposed approach

- 3.2 Licences in the 32 GHz band were originally awarded on a block assigned, national and technology neutral basis. However, all licences in the band have been used for point-to-point fixed links. We are not aware of concrete evidence of demand for any other type of use in this spectrum and our preliminary view is that fixed links will continue to be the most likely and highest value use in this band.
- 3.3 Some stakeholders have previously expressed interest in deploying FWA for broadband services in this spectrum. However, we are not currently aware of any FWA equipment availability for this band.
- 3.4 We are therefore proposing to make the returned spectrum in the 32 GHz band available for new fixed links.

Availability of this spectrum is relevant to future use of unassigned spectrum in the 28 GHz band

- 3.5 In our [statement and consultation on increasing use of the 27.5 – 30 GHz \(“28 GHz”\) band](#), we proposed to make 2 x 112 MHz of unassigned spectrum in the 28 GHz band available for fixed links (on an Ofcom-assigned basis) and 1 x 112 MHz to land-based satellite terminals.
- 3.6 We explained that there was interest in this spectrum for both fixed links and satellite terminals but that we held mixed evidence on the likely potential benefits of making additional 28 GHz spectrum available for these services. The consultation closed on 31 May 2024 and we are considering the responses received.
- 3.7 The return of spectrum by MLL and our 32 GHz proposal set out above means that, if following this consultation we were to decide to proceed with our proposal, there would be more spectrum available for Ofcom-managed fixed links. Our view is that, for fixed links, 32 GHz spectrum is broadly substitutable for 28 GHz spectrum. Therefore, the potential availability of more 32 GHz spectrum for fixed links is relevant to our decision on the future use of unassigned 28 GHz spectrum.
- 3.8 We have not yet made a decision on future use of the unassigned 28 GHz spectrum. We plan to review responses to this consultation on 32 GHz spectrum before making a final decision on future use of the unassigned 28 GHz spectrum and publish our decision on both bands in a combined statement later this year.

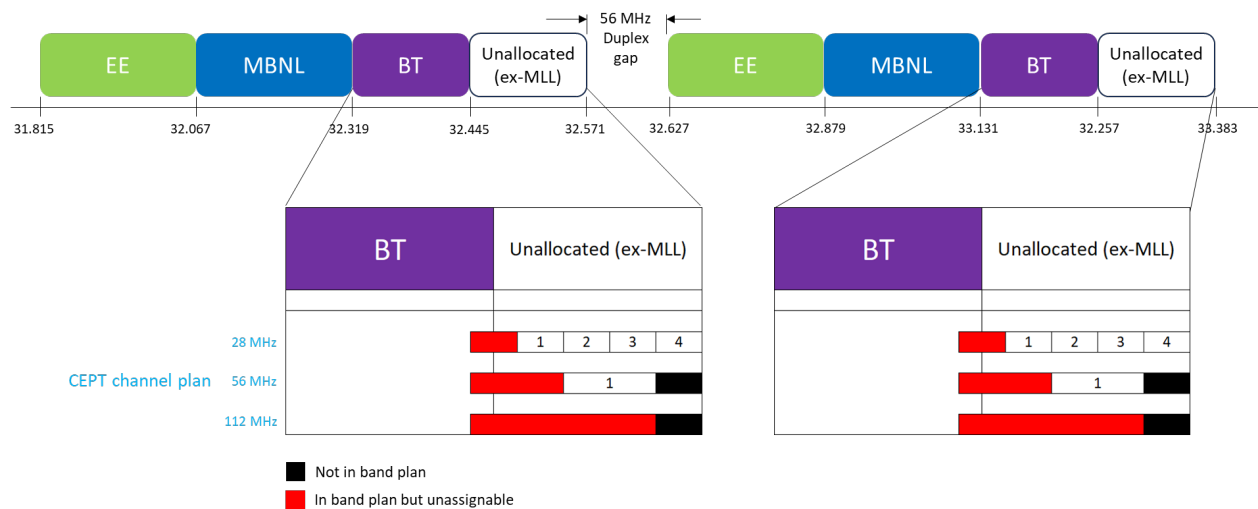
Proposed authorisation approach for the returned 32 GHz spectrum

- 3.9 We have also considered which is the most appropriate authorisation mechanism for this spectrum. Our preliminary view is that we should authorise this spectrum on an Ofcom-managed basis. This means that Ofcom would coordinate the individual assignment of frequencies within this spectrum.
- 3.10 An alternative option would be to use a block assigned authorisation approach, i.e. to offer this block of spectrum on a nationwide or regional basis via an award, such as an auction. This approach generally results in a small number of users gaining access to the spectrum. This can have potential efficiency benefits compared to an Ofcom-managed approach as it allows the spectrum licensee(s) flexibility to make more intensive use of spectrum within the boundaries (geography and frequency) of its licence.
- 3.11 Ofcom-managed licences on the other hand generally allow a greater number of different users to access the same spectrum resource but tend to require more conservative boundary conditions to provide assurance that different spectrum users will not cause interference to each other.
- 3.12 However, our recent review of future use of fixed links showed an overall decline in the number of links used by mobile network operators (MNOs), who are the biggest users of links in the UK and are generally among the most likely participants in auctions of block assigned spectrum.
- 3.13 In addition, auctions are resource intensive exercises, both for Ofcom and bidders and can take many months to prepare and run. The Ofcom-managed approach on the other hand can be introduced quickly, allowing the spectrum to be brought into use earlier compared to the block assigned approach, and with easier access for a greater number of different users. The amount of unassigned spectrum available in the 32 GHz band is also relatively limited. We therefore consider that the pragmatic approach in this case is to offer this spectrum for assignment on an Ofcom-managed basis.
- 3.14 We also note that this spectrum may be of interest to users of fixed links who need to migrate links from 26 GHz and 40 GHz, which are being partially cleared to allow these bands to be made available for new services including 5G. In this context, we consider that authorising the returned 32 GHz spectrum on an Ofcom-managed basis could have particular benefits as it would provide greater flexibility for multiple different fixed links users to gain access to it.

Proposed channel arrangements in the returned 32 GHz spectrum

- 3.15 Figure 2 below shows a possible channel plan for new assignments in the returned 32 GHz spectrum. This channel plan is based on the recommended channel plan in [ERC Recommendation \(01\)02](#).

Figure 2: Potential 32 GHz channel plan



- 3.16 We are proposing to open 28 MHz channels and one or more 56 MHz channels for new assignments². Evidence from our recent [Review of Fixed Links Call for input \(CFI\)](#) indicates that most operators are moving towards larger channel bandwidths. We are not currently proposing to open 14 MHz channels but will revisit this if responses indicate a demand for smaller channel bandwidths.
- 3.17 We are currently considering which channel plan would provide the most efficient way of making this spectrum available for new assignments while protecting BT links in the adjacent spectrum. As shown in the diagram above, following the CEPT channel plan would leave some frequency separation between new assignments and the adjacent spectrum block. However, there are other possible approaches available that may be more efficient while also protecting links in the adjacent spectrum. These approaches could have implications for Ofcom’s current fixed links assignment process and require further consideration. We will investigate these approaches further during the consultation period. We are therefore not making firm proposals on the specific channel plan now but will provide an update on this in our policy statement, if we decide to proceed with our proposals.
- 3.18 We note that the same considerations apply to Ofcom-assigned fixed links in the returned 28 GHz spectrum, which also has a frequency boundary with block-assigned fixed links. We are considering potential channel plans for 28 GHz as part of our work on that band.

Coexistence with users in adjacent bands

- 3.19 As shown in Figure 2, there are guard bands at the top and bottom of the 32 GHz band to protect adjacent users – closed circuit television (CCTV) below 31.8 GHz and radiolocation above 33.4 GHz.
- 3.20 Our preliminary view is that these guard bands are likely to be sufficient to manage the risk of harmful interference from new Ofcom-assigned fixed links assignments to radiolocation services above 33.4 GHz.

² The channel plan in the diagram only supports 1 x 56 MHz channel. It is potentially possible to make 2 x 56 MHz channels available in the unassigned spectrum by diverging from this channel plan.

Question 1: Do you agree with our proposal to make this spectrum available for fixed links? Are there other potential users of these frequencies which we have not identified?

Question 2: Do you agree with our proposal to make this spectrum available on an Ofcom-managed basis?

Question 3: Do you agree that 28 and 32 GHz spectrum is broadly substitutable from a fixed links perspective? If not, please explain why this is the case and provide evidence to support your views. In particular we would be interested to understand any differences between the 28 and 32 GHz bands which could make them more or less suitable for fixed links migrating from the 26 or 40 GHz bands.

Question 4: Do you agree with our provisional proposal to make 28 MHz channels and one or more 56 MHz channels available for new fixed link assignments? If not, please explain the reasons for your view and set out any preferred alternative approach.

Question 5: Do you have any additional concerns or comments regarding the proposals in this consultation document?

Impact assessments

- 3.21 Impact assessments provide a valuable way of assessing different options for regulation and considering the potential effects of our proposals. They form part of best practice policy making.
- 3.22 This section outlines our assessment of how our proposal may affect the relevant stakeholders which include existing users of the 32 GHz band and citizens and consumers³.
- 3.23 Overall, we consider that our proposals to make more spectrum available for fixed links in the 32 GHz band would benefit citizens and consumers as it would enable fixed links operators to increase their capacity to serve more consumers and businesses with improved services and would not adversely affect existing users.

Impact on other potential new users of the 32 GHz band

- 3.24 We have considered how our proposals would impact other potential users of the returned spectrum. We are not aware of any concrete demand for use of this spectrum by users other than fixed links. However, we will review responses to our consultation and update our impact assessment if further information comes to light.

Impact on existing users of the 32 GHz band

- 3.25 We have considered how our proposal to make new fixed links assignments in the returned 32 GHz spectrum might impact existing users of the 32 GHz band, in particular the licensee operating adjacent to the returned spectrum. One potential approach would be to use the channel plan in the ERC Recommendation 01(02) which would result in frequency separation between new assignments and the adjacent licensee. We think there are alternative

³ We plan to assess the overall impact of our decisions on 28 GHz and 32 GHz in our combined statement later this year. For the purposes of this consultation, the impact assessment focuses on our standalone 32 GHz proposals.

approaches available which may be more efficient while also protecting links in the adjacent spectrum, but these have implications for our assignment system and require further investigation. We are therefore proposing to carry out further work on this, including consulting directly with the affected licensee as appropriate. We will take account of stakeholder representations and update our impact assessment as required before making a decision on which channels to bring into use.

Impact on citizens and consumers

- 3.26 Our proposal to make available additional spectrum for fixed links in the unassigned spectrum would enable fixed links operators to access additional bandwidth to provide services to consumers. This would allow them to offer services to more consumers and businesses, including those in hard-to-reach areas.

Equality Impact Assessment

- 3.27 We have given careful consideration to whether our decision and proposals will have a particular impact on persons sharing protected characteristics (broadly including race, age, disability, sex, sexual orientation, gender reassignment, pregnancy and maternity, marriage and civil partnership and religion or belief in the UK and also dependents and political opinion in Northern Ireland), and in particular whether they may discriminate against such persons or impact on equality of opportunity or good relations. This assessment helps us comply with our duties under the Equality Act 2010 and the Northern Ireland Act 1998.⁴ We have also had regard to the matters in section 3(4) of the Communications Act.
- 3.28 We do not consider that our proposals have equality implications under the 2010 Act or the 1998 Act.

Welsh language impact assessment

- 3.29 Ofcom is required to take Welsh language considerations into account when formulating, reviewing or revising policies which are relevant to Wales (including proposals which are not targeted at Wales specifically but are of interest across the UK)⁵.
- 3.30 We do not consider our decision and proposals have any impact on opportunities for persons to use the Welsh language or treating the Welsh language no less favourably than the English language. We also do not think there are ways in which our decision and proposals could be formulated so as to have, or increase, a positive impact, or not have adverse effects or decrease any adverse effects. This is because our decision and proposals relate to spectrum access across the UK.
- 3.31 We note that Ofcom's current practice is to offer to produce spectrum licences in Welsh, and when requested does provide licences in Welsh, in accordance with its obligations set by the Welsh Language Commissioner. This will apply to licences discussed in this document.

⁴ [Section 75 of the Northern Ireland Act 1998](#)

⁵ See [Standards 84 – 89 of Hysbysiad cydymffurfio \(in Welsh\)](#) and [compliance notice](#) in English. Section 7 of the Welsh Language Commissioner's Good Practice Advice Document provides further advice and information.

A1. Responding to this consultation

How to respond

- A1.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 13 September 2024.
- A1.2 You can download a response form from <https://www.ofcom.org.uk/spectrum/frequencies/consultation-expanding-spectrum-access-for-fixed-links-in-the-32-ghz-band>. You can return this by email or post to the address provided in the response form.
- A1.3 If your response is a large file, or has supporting charts, tables or other data, please email it to 32GHz@ofcom.org.uk, as an attachment in Microsoft Word format, together with the cover sheet. This email address is for this consultation only and will not be valid after 31 December 2024.
- A1.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:
- A1.5 Spectrum Management and Authorisation
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- A1.6 We welcome responses in formats other than print, for example an audio recording or a British Sign Language video. To respond in BSL:
- > send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, wmv or QuickTime files; or
 - > upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.
- A1.7 We will publish a transcript of any audio or video responses we receive (unless your response is confidential)
- A1.8 We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt of a response submitted to us by email.
- A1.9 You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.
- A1.10 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex A4. It would also help if you could explain why you hold your views, and what you think the effect of Ofcom's proposals would be.
- A1.11 If you want to discuss the issues and questions raised in this consultation, please contact us by email at 32GHz@ofcom.org.uk.

Confidentiality

- A1.12 Consultations are more effective if we publish the responses before the consultation period closes. This can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish responses on the Ofcom website at regular intervals during and after the consultation period.
- A1.13 If you think your response should be kept confidential, please specify which part(s) this applies to and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.
- A1.14 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.15 To fulfil our pre-disclosure duty, we may share a copy of your response with the relevant government department before we publish it on our website.
- A1.16 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's intellectual property rights are explained further in our Terms of Use.

Next steps

- A1.17 Following this consultation period, Ofcom plans to publish a statement by the end of 2024.
- A1.18 If you wish, you can register to receive mail updates alerting you to new Ofcom publications.

Ofcom's consultation processes

- A1.19 Ofcom aims to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annex A2.
- A1.20 If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how Ofcom could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.
- A1.21 If you would like to discuss these issues, or Ofcom's consultation processes more generally, please contact the corporation secretary:

Corporation Secretary
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA
Email: corporationsecretary@ofcom.org.uk

A2. Ofcom's consultation principles

Ofcom has seven principles that it follows for every public written consultation:

Before the consultation

A1.22 Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. If we do not have enough time to do this, we will hold an open meeting to explain our proposals, shortly after announcing the consultation.

During the consultation

A1.23 We will be clear about whom we are consulting, why, on what questions and for how long.

A1.24 We will make the consultation document as short and simple as possible, with an overview of no more than two pages. We will try to make it as easy as possible for people to give us a written response.

A1.25 We will consult for up to ten weeks, depending on the potential impact of our proposals.

A1.26 A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Ofcom's Consultation Champion is the main person to contact if you have views on the way we run our consultations.

A1.27 If we are not able to follow any of these seven principles, we will explain why.

After the consultation

A1.28 We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish the responses on our website at regular intervals during and after the consultation period. After the consultation we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A3. Consultation coversheet

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
- > Name/contact details/job title
- > Whole response
- > Organisation
- > Part of the response

If you selected 'Part of the response', please specify 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)?

Yes No

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 aims to publish responses at regular intervals during and after the consultation period. 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)

A4. Consultation questions

Question 1: Do you agree with our proposal to make this spectrum available for fixed links? Are there other potential users of these frequencies which we have not identified?

Question 2: Do you agree with our proposal to make this spectrum available on an Ofcom-managed basis?

Question 3: Do you agree that 28 and 32 GHz spectrum is broadly substitutable from a fixed links perspective? If not, please explain why this is the case and provide evidence to support your views. In particular we would be interested to understand any differences between the 28 and 32 GHz bands which could make them more or less suitable for fixed links migrating from the 26 or 40 GHz bands.

Question 4: Do you agree with our provisional proposal to make 28 MHz channels and one or more 56 MHz channels available for new fixed link assignments? If not, please explain the reasons for your view and set out any preferred alternative approach.

Question 5: Do you have any additional concerns or comments regarding the proposals in this consultation document?

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