



NON-CONFIDENTIAL VERSION

Annual Licence Fees for UK Broadband's 3.4 GHz and 3.6 GHz spectrum

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Executive summary

1. BT¹ is concerned with Ofcom's proposals from a point of principle, because the approach used could indirectly affect our own future fees and may impact the secondary trading market.
2. We reiterate that Annual Licence Fees (ALFs) based on auction prices are not necessary or proportionate for efficient spectrum allocation for mobile operators. Moreover, considering their potential to restrict efficient investment, imposing the proposed ALFs is detrimental to fulfilling Ofcom's statutory duties. We continue to hold the view that, if Ofcom is to persist with ALFs, consideration of Ofcom's wider duties in relation to promotion of competition, investments and the interests of consumers should lead to lower fees than those based on full market values.
3. We are also concerned that ALFs based on 3.4GHz prices may inhibit spectrum trading to resolve 3.4-3.8 GHz band fragmentation, particularly if auction prices of 3.6 GHz are substantially lower than those of the 3.4 GHz (which is plausible given all MNOs now hold 5G launch spectrum).
4. Despite our concerns over Ofcom's general approach to ALFs, whilst these wider concerns remain unresolved and consistent with the principle of non-discrimination, UK Broadband should immediately pay for the spectrum assigned to it: this should be on a similar basis to that which applies to the other Mobile Network Operators (MNOs). In this respect we do not dispute the proposed initial fee levels that are derived on a similar basis to the method Ofcom applies for determining fees for other bands.
5. We would, however, suggest that Ofcom reviews these new 3.4 GHz and 3.6 GHz fees if the 3.6 GHz auction indicates materially lower prices than the 3.4GHz auction, and Ofcom must make clear its position on this issue before the 3.6 GHz auction.

¹ BT including its subsidiary mobile network operator EE Limited

1 Introduction

We welcome this opportunity to comment on the proposed ALFs for UK Broadband Ltd. The approach used could indirectly affect our own future fees and may impact the secondary trading market.

Our response sets out in **section 2** our overall position on ALFs. First, we explain why ALFs do not promote efficient use of spectrum and so are unnecessary in principle. Second, we explain why Ofcom should re-assess its decision to set ALFs at full market value in light of its wider regulatory duties and, at the very least, intentionally set ALFs significantly below its most conservative estimate of full market value (if it is to impose any level of ALFs at all) in order to promote competition and investment in the interests of consumers.

Notwithstanding this position, in **section 3** we propose how Ofcom should adjust its approach for setting UK Broadband's ALFs if it decides, nonetheless, to proceed with its proposal.

2 BT's overall position on ALFs

As set out at length in our response² to Ofcom's June 2018 consultation on Annual Licence Fees for the 900 MHz and 1800 MHz frequency bands, we believe Ofcom's view that ALFs should be set at full market value is flawed when considering its wider duties under UK law and the European regulatory framework. In the remainder of this section, we summarise our position on this issue; a full description of our position on ALFs may be found in our various responses to ALFs for the 900 MHz and 1800 MHz frequency bands.

2.1 Promoting efficient use of spectrum

ALFs are not necessary to ensure that MNOs make efficient use of their spectrum holdings. MNOs face the implicit price – or 'opportunity cost' – of spectrum irrespective of any administratively imposed fee. Below, we explain how MNOs face opportunity costs of the three types Ofcom considers: (i) own use opportunity cost; (ii) opportunity cost amongst competing mobile users; and (iii) opportunity cost in terms of non-mobile use. We then go on to explain why it is disproportionate for Ofcom to intervene in these circumstances, before making concluding remarks.

(i) Own use opportunity cost: In meeting growing demand for coverage, data capacity and higher quality service (including 5G), MNOs face a constant trade-off between efficient use of existing spectrum and investment in new sites on the one hand and acquisition of new spectrum on the other. Mobile spectrum is intensively used in the areas where traffic demand requires this as it is generally less costly to deploy more spectrum (where it is available) than to build new sites. As described by Williamson (2018):

"There are sound reasons for expecting mobile network operators to make efficient ongoing use of spectrum following initial allocation, since operators face continuous trade-offs in meeting data demand growth in terms of: (i) the efficient use of existing spectrum [...] (ii)

² https://www.ofcom.org.uk/data/assets/pdf_file/0023/119291/BT.pdf

more intensive use of existing spectrum [and] (iii) acquisition of additional spectrum either via the primary market (auction) or secondary market (trading)”³

(ii) Opportunity cost amongst competing mobile users: Ofcom recognises that its frequent⁴ spectrum auctions help allocate spectrum efficiently *between* users. With regards to spectrum trading, a perceived lack of trading to date does not in itself imply a risk that spectrum is allocated inefficiently between users and that therefore there is a need to intervene, particularly given that MNOs make significant investments in equipment to support existing spectrum holdings and so are likely to already be the highest value users of their existing spectrum holdings. Furthermore, we disagree with Ofcom’s view that MNOs do not sufficiently account for opportunity costs when considering whether to trade spectrum. In particular, we disagree with Ofcom’s claim that:

“Decision-makers may not themselves have incentives to fully consider opportunity costs e.g. if strong pressures are put on managers to reduce or contain their operating budgets, but less importance is placed on realising untapped revenue sources such as might arise from selling spectrum”⁵

Ofcom has provided no evidence to substantiate this claim, besides stating that Arqiva, BT and H3G agreed with this claim in 2010, with BT agreeing at least where market mechanisms are not well established and where competition considerations might provide a significant disincentive to trade. In this respect, we make the following observations:

- Firstly, Ofcom’s claim lacks the support of the majority of MNOs, with O2 and Vodafone disagreeing⁶ with Ofcom’s statement and H3G recently stating⁷ that Ofcom *“makes no attempt to determine whether mobile managers face such pressures in practice”*.
- Secondly, BT’s support for this claim in 2010 was conditional on market mechanisms not being well established and where competition considerations might provide a significant disincentive to trade. Since 2010, several spectrum trades have occurred and more trades have been proposed⁸, implying that trading is more feasible now than in 2010.
- Thirdly, Ofcom has provided no robust empirical evidence to substantiate this claim (for example, survey evidence or other empirical evidence demonstrating that spectrum managers take less account of opportunity costs than accounting costs).
- Fourthly, the limited support for this claim dates back to 2010, which is nearly a decade ago, and so shouldn’t be treated as current support.

³ Page 6 of Williamson, B., *“Keeping an eye on the prize – investment in mobile networks to deliver coverage, capacity & the 5G strategy: A reappraisal of recurring spectrum fees”*, May 2018, <http://www.commcham.com/storage/Reappraising%20recurring%20spectrum%20fees%20May%202018%201.pdf>

⁴ If the next auction takes place in Spring 2020 as planned, 3 auctions would have occurred in the 7 years between 2013 and 2020. There are also large tranches of spectrum in so called ‘mm-band’ frequencies that are expected to be available for mobile use in future.

⁵ Paragraph 4.24a of Ofcom’s consultation on Annual Licence Fees for UK Broadband’s 3.4 GHz and 3.6 GHz spectrum, 17 December 2018, <https://www.ofcom.org.uk/consultations-and-statements/category-2/annual-licence-fees-3.4-ghz-3.6-ghz-spectrum>

⁶ Footnote 48 of Ofcom’s consultation on Annual Licence Fees for UK Broadband’s 3.4 GHz and 3.6 GHz spectrum, 17 December 2018, <https://www.ofcom.org.uk/consultations-and-statements/category-2/annual-licence-fees-3.4-ghz-3.6-ghz-spectrum>

⁷ Page 11 of H3G’s response to Ofcom’s Consultation on Annual Licence Fees for 900MHz and 1800MHz spectrum, 17 August 2018, https://www.ofcom.org.uk/_data/assets/pdf_file/0025/119293/Three.pdf

⁸ For example, see Ofcom’s announcement on 20 December 2018 of an application by Vodafone Limited and Telefonica UK Limited for a partial trades of the frequencies they hold in the 900 MHz band, described on Ofcom’s website at <https://www.ofcom.org.uk/manage-your-licence/radiocommunication-licences/mobile-wireless-broadband>

(iii) Opportunity cost in terms of non-mobile use: In principle, there is a possibility that some alternative use is of higher value at the margin than mobile use, but in practice it is accepted by Ofcom and Government that spectrum should be reallocated from other uses including government use and terrestrial broadcasting to mobile use because mobile offer higher value use. The opportunity cost which operators face is therefore the market opportunity cost.

The introduction of Administrative Incentive Pricing followed a number of recommendations about the public sector's approach to spectrum management by Professor Martin Cave (the 'Cave Audit').⁹ However, government use differs from commercial mobile use in terms of incentives¹⁰ for the optimal use of spectrum. In particular, government users may not be sufficiently responsive to an implicit price alone for institutional reasons including a lack of property rights over the spectrum in question, lack of profit motive and administrative claw back of the proceeds of asset sales. Imposing an administrative price may therefore be appropriate and proportionate in relation to government use, but not mobile use.

(iv) Disproportionate to intervene: Section 3(3) of the Communications Act 2003 states that Ofcom, in performing its duties, must have regard to the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed. Section 6 (1) of the Communications Act states that regulation by Ofcom should not involve the imposition of burdens which are unnecessary. In Ofcom's own words, this "*bias against intervention*" means that a high hurdle must be overcome before Ofcom regulates.¹¹ It also means that, if intervention is justified, Ofcom must choose the least intrusive means of achieving its objectives, recognising the potential for regulation to reduce competition.¹² Moreover, Article 5(2) of the Authorisation Directive also states that administrative fees for spectrum must be aimed at encouraging efficient use.

As noted earlier, a perceived lack of spectrum trading to date does not in itself imply a risk that spectrum is allocated inefficiently between users and that therefore there is a need to intervene. In particular, this is because MNOs make significant investments in equipment to support existing spectrum holdings and so are likely to already be the highest value users of their existing spectrum holdings in most cases.

Ofcom's assessment that a perceived lack of trading "*does not necessarily rule out the possibility that [the licensee] may not be the highest-value users of this spectrum*"¹³ sets an extremely low bar for intervention. Ofcom must make a stronger case for intervention than simply asserting a "*possibility*" that licensee "*may*" not be the highest value users, despite strong evidence to the contrary. Moreover, there are other more appropriate measures Ofcom could take if the volume of trading was their concern; for example, seeking legislative change so they could organise a buy/sell auction to facilitate secondary trading.

⁹ Paragraph A5.10 of Ofcom's consultation on "SRSP: The revised Framework for Spectrum Pricing", 29 March 2010, https://www.ofcom.org.uk/data/assets/pdf_file/0021/36804/srsp_condoc.pdf

¹⁰ The reason that incentives differ and that an implicit price may not be sufficient flows from the fact that not all government use suffers from spectrum scarcity and that there are grounds for seeking a reallocation of spectrum at the margin from government use to mobile use based on competing use value estimates, for example, in relation to some spectrum held by the Ministry of Defence and for terrestrial broadcasting.

¹¹ Ofcom, "Better Policy Making - Ofcom's approach to Impact Assessment" website, <https://www.ofcom.org.uk/consultations-and-statements/better-policy-making-ofcoms-approach-to-impact-assessment>

¹² Ibid.

¹³ Paragraph 4.16 of Ofcom's consultation on Annual Licence Fees for UK Broadband's 3.4 GHz and 3.6 GHz spectrum, 17 December 2018, <https://www.ofcom.org.uk/consultations-and-statements/category-2/annual-licence-fees-3.4-ghz-3.6-ghz-spectrum>

(v) Conclusion: An administratively imposed ALF on mobile use is not therefore required or proportionate to promote the optimal use of spectrum when assessed against the costs and risks that high ALFs may ultimately have for consumers, and the availability of adequate market mechanisms. This is an important point for Ofcom to address as it considers its wider statutory duties.

2.2 Impact on efficient investment

Ofcom has statutory duties to promote both (i) efficient investment and (ii) the efficient use of spectrum. These duties derive from both European and domestic legislation, specifically from: (i) the Common Regulatory Framework for electronic communications networks and services, in particular the Framework Directive (Directive 2002/21/EC) and the Authorisation Directive (Directive 2002/20/EC – see in particular Article 5(2)); and (ii) the Communications Act 2003 (see Section 3(2)(a)) and the Wireless Telegraphy Act 2006.

In order to discharge these statutory duties, Ofcom should give significantly more weight to the presence of a possible information failure¹⁴ on the part of capital markets which could restrict efficient investment. Specifically, Ofcom should seek to balance the risks of efficient investment being prevented by ALFs against Ofcom’s perceived risk of spectrum not being allocated efficiently in the absence of ALFs. We believe that, in order to err on the side of caution given the high priority given to additional investment by the Government (in the FTIR¹⁵) and by Ofcom, this balancing exercise should result in Ofcom intentionally setting ALFs significantly below its most conservative estimate of full market value, rather than at full market value, if Ofcom is to impose any ALFs at all.

In paragraph 4.48b of Ofcom’s consultation on UK Broadband’s ALFs, Ofcom states that reducing ALFs to offset possible information failure on the part of capital markets “*would effectively be an unconditional subsidy for MNOs, which would not be targeted at the potential market failure in question*”. However, the perceived lack of ‘conditionality’ is an inadequate rationale for potentially restricting efficient investment, the promotion of which is one of Ofcom’s statutory duties.

3 Our concerns with Ofcom’s implementation of ALFs for UK Broadband

We have explained our concerns in relation to Ofcom’s general approach above (section 2). Whilst these wider concerns remain unresolved, UK Broadband should immediately pay for the spectrum it has been assigned, in light of the principle of non-discrimination. In this section we provide our views on the approach Ofcom has proposed for ALFs for UK Broadband’s spectrum.

3.1 Suitability of the 3.4 GHz auction benchmark

The 2018 3.4 GHz auction was conducted in an environment of limited available spectrum suitable for 5G (an average of 37 MHz per MNO) as Ofcom choose not to award the full band in a single

¹⁴ Ofcom recognises that external providers of finance have less information on the quality and riskiness of the company’s investments than MNOs and so may turn down efficient investment requests by capacity constrained MNOs. See paragraph 4.48a of its consultation on Annual Licence Fees for UK Broadband’s 3.4 GHz and 3.6 GHz spectrum, 17 December 2018, <https://www.ofcom.org.uk/consultations-and-statements/category-2/annual-licence-fees-3.4-ghz-3.6-ghz-spectrum>

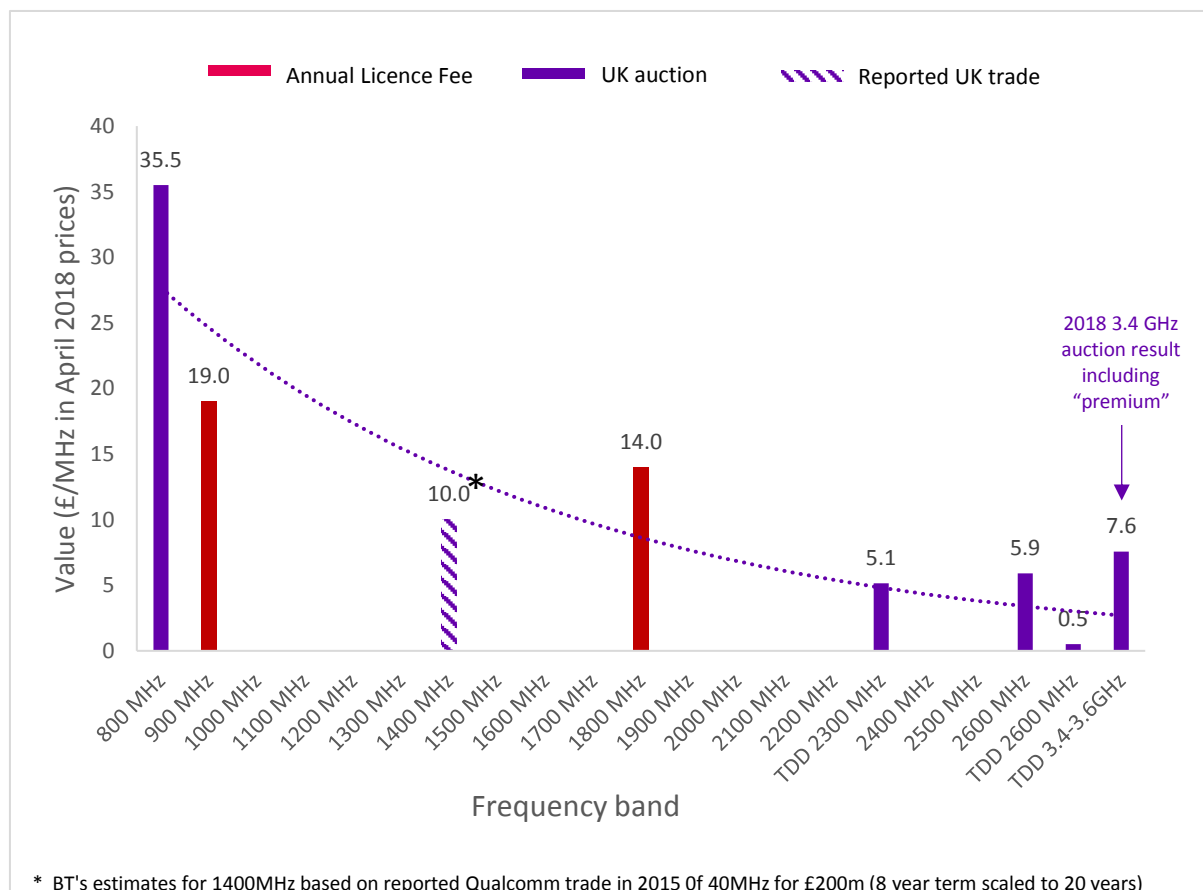
¹⁵ The Government’s Future Telecoms Infrastructure Review (FTIR) dated 23 July 2018 states “*The Government’s strategic priority is to promote investment and innovation in 5G to ensure services and applications are widely available to the benefit of consumers and the UK economy*” and “*We want to ensure that the UK has the strongest conditions in place to secure the investment we need*”. See https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732496/Future_Telecoms_Infrastructure_Review.pdf

auction. The 3.4 GHz auction was therefore conducted in an environment of artificial scarcity which could have led to a “premium”.

In addition, the 3.4 GHz spectrum auctioned in 2018 was the only certain way of launching 5G in the near future – in other words, acquiring this spectrum was the only way an MNO could potentially be the “first to 5G” – so there was also a first-mover-advantage “premium” that applied to this spectrum which is unlikely to apply to the 3.6 GHz spectrum auctioned in 2020.

The overall “premium” paid for 3.4 GHz spectrum by all MNOs during the 2018 auction, relative to the trend implied by other bands, can be seen in the chart below.

Figure 1: UK absolute spectrum value reference points since 2010



Due to both artificial scarcity and the first-to-5G premium, the price of 3.4 GHz spectrum in the 2018 auction might significantly exceed the price of 3.6 GHz spectrum during the 2020 auction.

We are concerned that ALFs based on 3.4GHz prices may inhibit possible spectrum trading to resolve 3.4-3.8 GHz band fragmentation, given that auction prices of 3.6 GHz spectrum may well be lower than those of 3.4 GHz spectrum. Logically, if 3.6 GHz were much cheaper than the 3.4GHz, it would be rational behaviour if the affected operator were to buy new 3.6 GHz auction spectrum and hand the old 3.4GHz ALF spectrum back to Ofcom, which may not be an efficient outcome given the timescales and process to re-award it.

3.2 Methodology to determine UK Broadband’s fees

Notwithstanding our general views on ALFs summarised above and our concerns over the suitability of the 3.4 GHz auction benchmark, we agree that, in applying Ofcom’s methodology to set ALFs for

UK Broadband's spectrum, the marginal opportunity cost of spectrum *to other users* should be used for the reasons Ofcom explains.

3.3 Our suggested approach

We appreciate Ofcom's consideration that there is benefit to licensees in having some certainty over what fees will be over the longer-term, and recognise its proposal that it is unlikely to review ALFs within the five years after implementing them, save in very exceptional circumstances, and retain them beyond that date unless there were grounds to believe that a material misalignment had arisen.

However, we note that the underlying risk Ofcom is addressing is more of an upward than a downward risk to licensees (i.e. licensees are less likely to be harmed by an unexpected downwards revision to their ALFs than by an unexpected upwards revision to their ALFs).

Therefore, notwithstanding our views on ALFs in general, we believe Ofcom should initially set UK Broadband's ALFs at the level proposed in its current consultation but then potentially revise them downwards shortly after the 2020 3.6 GHz auction if this auction suggests a lower opportunity cost than in the 2018 3.4 GHz auction. In other words, Ofcom should not set fees purely based on the 2018 3.4 GHz auction (other than on a provisional basis until the 3.6 GHz auction completes) if there is evidence that the opportunity cost of 3.6 GHz spectrum during the 2020 auction is materially lower than the opportunity cost of 3.4 GHz in the 2018 auction.

4 Responses to consultation questions

Notwithstanding our views described above, please find our responses to the questions raised within Ofcom's consultation document below.

Question 1: Do you agree with our proposal to set ALFs in respect of UK Broadband (UKB)'s 3.6 GHz spectrum at the same rates as for UKB's 3.4 GHz spectrum?

Please see sub-section 3.1 of our response above.

Question 2: Do you have any views on our provisional conclusion to use the marginal opportunity cost to other users to calculate the lump sum value for the purposes of setting ALFs for these bands? Please provide any evidence you have to support your position.

Please see sub-section 3.2 of our response above.

Question 3: Do you agree with our proposed approach to annualisation?

We have no further comments to make on the proposed approach to annualisation for UK Broadband's ALFs.

Question 4: Do you agree with our proposal to introduce ALFs for UKB's 3.4 GHz spectrum immediately, and to phase in the revised ALFs for UKB's 3.6GHz spectrum in two steps as described?

Notwithstanding our views described above, including our overall views on ALFs in general, we have no concerns with the timing of 3.4 GHz ALFs and agree that there is a case for phasing in 3.6 GHz ALFs.

Question 5: Do you agree with our provisional conclusion that fees set based on our estimate of market value will best meet our statutory duties?

Please see section 2 of our response above.

Question 6: Do you have any other comments that you wish to make in respect of the proposals that we make in this consultation?

None besides those which we make above.