






Optimal use of 3.9 GHz spectrum




UK Broadband's application for licence
variation and proposals to promote
efficient use of 3.9 GHz spectrum

BT's response to Ofcom consultation
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BT Group



Executive summary

1. BT is pleased to provide its views on Ofcom's proposals to address UK Broadband's request to vary its 3925 – 4049 MHz licence to enable more optimal and efficient use of this spectrum by facilitating the deployment of Fixed Wireless Access systems based on 5G technology. We appreciate Ofcom's recognition of the wider issues surrounding the present and future use of this spectrum band and welcome the additional proposals that Ofcom has made that go beyond the simple request to vary the technical licence conditions.
2. BT has no issues with the proposed changes to the licence *technical* conditions, in terms of changes to how the in-band power limits are expressed, the relaxation of out of band emission limits and consequential changes to coordination procedures for the technical coordination with other users and services.
3. The licence limitation to fixed wireless access and not mobile use does, to an extent, limit the scope of competition considerations that might otherwise arise from this licence variation. The varied spectrum licence to facilitate 5G technology deployment, relieving pressure on 5G mobile bands, could nevertheless have some relevance to any forward-looking competition assessment that is undertaken in the overall mobile market. For example, the spectrum holding is of significance when considering any competition measures in future auctions or merger assessments.
4. We welcome Ofcom's proposals to address the present situation where UKB has "reserved" spectrum, but not used it, at a very large number of sites. Introducing and phasing in a time limit on the timeframe within which assignments coordinated by Ofcom must be brought into use is an appropriate measure to address this situation. We note that in the similar scenario of Local Access licences (available in other mobile bands) the time limit within which plans must exist to use spectrum, otherwise Ofcom would issue licences to others, is 3 years. We therefore suggest that 3 years is a more suitable timeframe for bringing into use the existing assignments instead of the 5 years Ofcom proposes.
5. We note that the current annual fee for the licence of £708,624 is very low compared to the opportunity cost of the spectrum and below the costs which Ofcom incurs in coordinating the assignments in the band. Even if considering only the 9,000 sites with unused assignments that Ofcom has coordinated, if priced at its current cost recovery-based fee for 3.8-4.2 GHz shared access licences of £640 per 80MHz licence, that would total £5.76m. Furthermore, this spectrum licence is for far higher base station powers than a medium power shared access licence would allow. This, coupled with the fact that the spectrum is leasable, raises questions as to whether the relatively low fee would mean that if applicants for shared access licences instead went via UK Broadband Ofcom would not recover the costs of the coordination work that it would be obliged to still do. We suggest that Ofcom clarifies the basis on which the fee is set and reviews it to ensure it is appropriate to secure optimal use of the spectrum and cover Ofcom's costs.
6. BT encourages Ofcom to keep the use of this spectrum under review, including the wider 3.8 – 4.2 GHz band within which it sits. This includes the different authorisation approaches and technical restrictions, including the possibility to re-award the spectrum for national mobile networks at a future time if evidence of the evolving demand and usage of the band warrants a different approach.

Introduction

BT welcomes this opportunity to provide its views on Ofcom's proposals to make changes to UK Broadband's 3.9 GHz licence which authorises use of the 3,925 – 4,009 MHz frequency range¹.

This spectrum band sits within the wider 3.8 – 4.2 GHz Shared Access Licence framework band which BT utilises for certain private networks and could also be of interest to us in the future for other applications.

Our responses to the consultation questions are given below.

Answers to consultation questions

Question 1: Do you agree with our proposed technical changes to the licence?

Yes, the technical conditions seem reasonable in the circumstances of this band and the objective of facilitating deployment of 5G technology while limiting interference to other users.

Question 2: Do you agree with our assessment of the impacts of our proposed technical changes to the licence?

Yes, the technical assessment of the technical impacts seems reasonable.

We also agree with Ofcom's assessment of other impacts, but would note that in a wider context, as is stated in the licence variation request, "3UK needs to offload FWA traffic from its 3.4-3.8GHz to dedicated 3.9 GHz spectrum, leaving 3.4-3.8GHz to serve mobile services and providing new capacity and faster speeds to customers of both services." Therefore while the proposal in isolation may not raise competition concerns, the variation could have relevance in other contexts, such as caps on spectrum holdings for future spectrum auctions or merger assessments.

Question 3: Do you agree with our proposal to introduce a use clause, including the specific timeframes proposed?

BT was surprised to learn that Ofcom has coordinated and reserved around 26,000 frequency assignments for use at nearly 9,000 locations but that the spectrum currently remains unused at these sites, thereby preventing use by applicants for shared access licences. Unlike the shared access licence assignments that are published in the WT Act licence register (WTR), the UK Broadband assignments are not published and this makes it difficult for other parties to assess the availability of the spectrum for shared access licences.

We welcome Ofcom's proposals to address this situation in terms of introducing and phasing in a limit on the timeframe within which assignments coordinated by Ofcom must be brought into use.

We note that for the scenario of Local Access licences (available in other tradable mobile spectrum bands) the time limit within which plans must exist to use spectrum otherwise Ofcom would issue licences to others, is 3 years. We suggest that 3 years is a more suitable timeframe for bringing into use

¹ https://www.ofcom.org.uk/_data/assets/pdf_file/0028/285607/Consultation-Optimal-use-of-3.9-GHz-spectrum.pdf

the existing assignments covered by this varied licence instead of the 5 years Ofcom proposes. On a rolling basis the 18 months that Ofcom proposes for future assignments may be reasonable in the context of this band where it is part of the wider Shared Access Band and routinely available of use by other users on a coordinated basis.

Question 4: Do you agree with our assessment of the impacts of our proposed use clause?

Yes, we agree with Ofcom's assessment.

Question 5: Do you have any other comments on our proposed use clause?

Our views are already covered in our response to Question 3.

Question 6: Do you agree with our proposal to update coordination with Shared Access users to assume synchronisation?

Yes, we agree that although this increases the risk of interference where systems are not synchronised, the benefits of coordination on the basis that Ofcom proposes will be very significant in terms of improving the likelihood of successful coordination and would achieve more efficient use of the spectrum.

Question 7: Do you agree with our proposal to remove adjacent channel protections of H3G assignments from Shared Access users?

Yes, BT agrees with Ofcom's proposal.

Question 8: Do you have any comments on our impact assessment (to the extent not covered by previous questions)?

BT has no comments.

Question 9: Do you have any comments on our Equality impact assessment?

BT has no comments.

Question 10: Do you have any comments on our Welsh Language impact assessment?

BT has no comments.

Question 11: Do you have any other comments on our proposals?

Fees

We note that the current annual fee for the licence of £708,624 is very low compared to the opportunity cost of the spectrum and even the costs which Ofcom incurs in coordinating the assignments in the band.

Even if considering only the 9,000 sites with unused assignments that Ofcom has coordinated, if priced at its current cost recovery-based fee for 3.8-4.2GHz shared access licences of £640 per 80MHz licence,

that would total £5.76m. Furthermore, this spectrum licence is for far higher base station powers than a medium power shared access licence would allow. This, coupled with the fact that the spectrum is leasable, raises questions as to whether the relatively low fee would mean that if applicants for shared access licences instead went via UK Broadband Ofcom would not recover the costs of the coordination work that it would be obliged to still do.

We suggest that Ofcom clarifies the basis on which the fee for this licence is set and reviews it to ensure they are appropriate to secure optimal use of the spectrum and cover Ofcom's costs.

Potential re-assignment of more of the 3.8 - 4.2 GHz band for national licences

If the unused UKB assignments do come in to use, that use would be at much higher power than is possible by others under shared access licences and, even though limited to fixed wireless use, would represent a much more extensive deployments than has been seen to date by other users in the much wider 3.8 – 4.2 GHz Shared Access licence band.

Making the 3.8 – 4.2 GHz spectrum available under a national licence, rather than individual location licences, would potentially be a much more efficient use of the band, both in terms of technical efficiency and economic efficiency. BT has previously questioned whether shared access licences represent the most efficient use of the 3.8 – 4.2 GHz band.²

Ofcom should review, in light of evidence of demand, whether it might be more optimal and efficient use of the 3.8-4.2GHz band if more of it were assigned to MNOs for high power national licences.

Alternatively if Local Access licences were available in the UKB assignment, as they are in the tradable mobile bands, then others could use the UKB spectrum at high power in places where there is no plans to use it.

The future evidence of UKB's use of its higher power licence compared to Shared Access Licence low/medium power use in the wider 3.8 – 4.2 GHz band could be valuable if Ofcom does review the arrangements of the band at a future date with a view to ensuring the licensing arrangements do support optimal and efficient use of the spectrum.

If Ofcom ultimately considers that standard power mobile use is possible and would represent a more efficient use of the 3.8 – 4.2 GHz band, then Ofcom should consider revocation of the UKB licence and re-awarding it for national mobile network use, along with some or all of the 3.8 – 4.2GHz band. Re-awarding the spectrum assigned to UKB if it is liberalised for mobile use would avoid potentially unfair windfall gains and would be consistent with Ofcom's recent policies in other bands (i.e. 40GHz) where licences were revoked rather than relying on trading to promote optimal and efficient use of the spectrum.

² See BT's response to Question 16 of Ofcom's November 2023 consultation on "supporting increased use of shared spectrum"
<https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/consultation-supporting-increased-use-of-shared-spectrum/responses/bt.pdf>



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