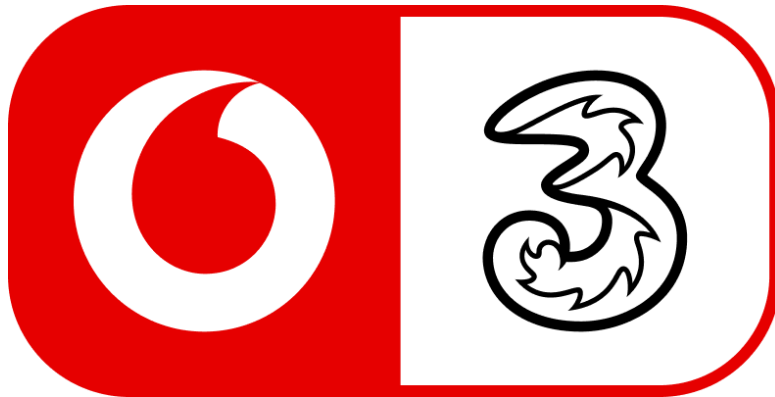




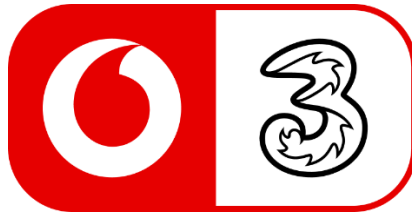
Response to Ofcom's Consultation:

Expanding access to the 6 GHz band for commercial mobile and Wi-Fi services

**Our approach to future mobile use in high density areas
and incumbent users in this band**

July 2026

PUBLIC



Introducing VodafoneThree

In June 2025, Vodafone UK and Three UK merged to become VodafoneThree. The merger signals the start of an exciting new chapter in UK communications, allowing citizens and consumers to benefit from a market leading new company that has the scale, resources and the innovative spirit to deliver game changing connectivity.

The merger signals not just a transition towards material enhancements in the UK's terrestrial mobile coverage, but it will create more opportunities such as the provision of D2D connectivity.

To find out more about VodafoneThree, our brands and how we are building the United Kingdom's best network, visit: [Building the UK's Best Network | VodafoneThree](#)

Executive Summary

VodafoneThree's preference is for national licensing for mobile usage, but we appreciate that certain 6GHz point-point links cannot be readily removed and may not clash with practical mobile usage, so acknowledge that an alternate approach may be justified.

Although we welcome Ofcom proposing 6GHz high density areas (HDAs) larger than those used for the award of mmWave spectrum, the proposed areas are too small. In this response, we provide evidence that $\propto$ of VodafoneThree's deployment would likely fall outside the HDAs.

Our recommendation would be a maximalist approach – having determined which incumbent 6GHz links are to be served revocation notices, Ofcom should set the extent of HDAs to be the geography where mobile usage would coexist with the remaining 6GHz links. This would not impede Wi-Fi usage in any way, because users would still have opportunistic access via Automated Frequency Coordination (AFC).

Should Ofcom not accept this, then we set out proposals to extend the proposed HDAs.

Context

We note that there are gaps in Ofcom's proposals for usage of the Upper 6GHz band, that could serve to confuse input to policy decisions. Specifically, we do not believe that Ofcom has so far explicitly set out the status of the mobile-priority section of the band outside the proposed high-density areas (HDAs). Our assumption is that for the frequencies which are proposed to be mobile-priority, this status will apply nationally, i.e. this includes outside the HDAs, to the extent that this is possible without compromising incumbent usage. To achieve this, outside HDAs any mobile licensing will be on a per-mast basis.

Ofcom's conclusions should explicitly state this, and that any Wi-Fi usage would be secondary to mobile regardless of location (i.e. there should be no suggestion of a first-come-first-served approach giving Wi-Fi users incumbency rights outside HDAs). We believe this approach is aligned with the direction being taken in Europe through the RSPG Opinion and the recently initiated ECC Work Item in FM61 to develop harmonised technical conditions for non-prioritised use of Wi-Fi.

If we have misinterpreted Ofcom's intent and instead the mobile prioritisation applies only to HDAs, then this would harden our requirement for a maximalist approach as set out in response to Question 1. In this interpretation of first-come-first-served, we would assert that a mobile deployment in the Wi-Fi priority part of 6GHz should equally then act as a blocker to any subsequent ability to deploy Wi-Fi at that area.

Answers to Questions

Question 1: Do you agree with our proposed set of 88 high density areas for 6 GHz authorisation? If you disagree, please provide your reasoning and evidence

Our preference is for national licensing, but we acknowledge that this would necessitate the removal of some 6GHz point-point links which are both difficult to replace and unlikely to clash with mobile usage. We therefore acknowledge that a sub-national licensing approach has merits for the UK market.

We appreciate that Ofcom has not simply defaulted to using the same HDAs as utilised for the mm-wave spectrum award. However, we disagree with the proposal as currently framed: the HDAs must be considerably wider.

Our preference - a maximalist approach

It is worthwhile taking a step back and considering why an HDA award approach is being considered by Ofcom. For the mm-wave award, the logic was that blanket awarding mobile licences outside HDAs would both unnecessarily displace incumbent users, and place a regulatory administrative burden when allowing third parties to share unused spectrum. For mm-wave, applications for alternative new entrant users to access the band inside HDAs would be via Local Access Licences and require liaison with the mobile licensees. The extent of the mm-wave HDAs thus struck a balance between not unduly impeding mobile deployment and not unduly impeding third party deployment:

- setting the HDAs any wider would mean that both Ofcom and mobile operators would need to be involved in processing more Local Access Licence applications;
- conversely, limiting the extent of the HDAs would potentially have left Ofcom swamped with mobile operators needing to deploy via the Shared Access regime outside the HDAs.

For 6GHz, the consideration of incumbent users remains, where this usage cannot be readily transitioned to other technologies/bands. However, the landscape for new entrant users sharing unused spectrum – i.e. Wi-Fi deployment – is now very different. Assuming that Ofcom proceeds with the proposals to

implement secondary Wi-Fi usage of the band via Automated Frequency Coordination (AFC), the administrative burden of dealing with sharing requests from non-mobile users falls away – the size of the HDAs has no impact on AFC operation. If the HDA areas inadvertently extend beyond the actual mobile deployment footprint, then from a Wi-Fi usage perspective this causes no issues because deployment will still be possible via AFC. The balance between not impeding mobile and third-party deployment is very different in the case of 6GHz to that faced with mm-wave.

For 6GHz, the only logic for setting the HDAs conservatively, i.e. beyond what is required to protect persisting incumbent usage, would be to provide [economic] signals to Wi-Fi deployers of where they are most likely to have security of tenure. The tacit message to Wi-Fi would be that outside HDAs you're less likely to have spectrum access disabled by AFC at some time in the future. Yet, absent reliable information about future mobile rollout, such signals would be misleading to Wi-Fi deployers, giving a false sense of security. Conversely, if the HDAs are set too narrowly, Ofcom will be swamped with applications from mobile operators for the deployment of individual masts outside HDA locations. The administrative overhead of these applications will also be an economic barrier to network rollout – a breach of Ofcom's growth duty.

We therefore believe that Ofcom should look at the question from another angle; a maximalist approach would set the HDA scope solely from the perspective of protecting unnecessary disruption of incumbent usage. The consultation has made a clear economic case to revoke a series of the 6GHz point-point licences (see response to Question 2). Ofcom should therefore define the HDAs solely according to what is required to protect the residual incumbent 6GHz users following this revocation. Taking such a maximalist approach would significantly increase the size of the HDAs, negating the need for Ofcom to process thousands of individual licence requests for mobile deployment outside the HDAs. It would enable operators to effectively plan the delivery of services across their networks and provide certainty in their investments. It would have zero impact on the ability to share unused spectrum with Wi-Fi via AFC (regardless of geography), and zero impact on the amount of incumbent 6GHz usage that needs to be cleared.

Our backstop – expand the existing proposals

Should Ofcom continue to take a more minimalist approach to defining the HDAs, then we have a series of observations on the proposals. Firstly, we believe that Ofcom is correct in principle to use deployment of the 3.4-3.8GHz band as a proxy for likely rollout of 6GHz mobile services. Deployment of 6GHz will be driven by both capacity and technology considerations – capacity in that there will ultimately be exhaustion of existing bands in many locations, and technology in that 6GHz will be the pioneer band for 6G services (much as was the case for the 3.4GHz band for 5G). ☒. Setting HDAs too small risks creating a digital divide on future rollout of 6G services.

The consultation analysis is seriously flawed in taking the July 2025/January 2026 3.4GHz rollout footprint as the baseline for setting the HDAs. ☒. We cannot speak for other mobile operators' deployment, but we note that this will be significantly driven by competitive dynamics, ☒. Usage of historic Connected Nations data therefore significantly underpredicts the ultimate extent of 3.4GHz rollout, hence the likely extent of 6GHz rollout.

Under the Network Commitment, VodafoneThree is unique in having both a Competition and Markets Authority (CMA) obligation and Ofcom spectrum licence requirement to deploy spectrum to a specific number of sites. We therefore know which individual sites are planned to be deployed as "high configuration", i.e. utilising 3.4GHz spectrum. Failure to deploy the High Configuration sites risks penalties under both our spectrum licence and the Enterprise Act. ☒. The assertion in the consultation¹ that there would be limited or no deployment of 6GHz in rural areas is wrong – we are legally committed to deploy

¹ Para 3.10.

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our High Configuration sites to at least 30 rural locations, i.e. 30% of rural sites, and these sites will generally see 6GHz deployed.

We have compared the proposed HDAs against our legally binding high configuration footprint, and this yields that of the 30 planned High Configuration sites, only 30 are within the proposed HDAs. If the current proposals are adopted, this would mean that almost 30% of prospective 6GHz sites would fall outside the HDAs, and Ofcom would be faced with the prospect of dealing with up to 30 individual applications from VodafoneThree alone to deploy spectrum outside of the HDAs (30). As we highlighted above, this would also mislead the Wi-Fi community as they could deploy outside of the HDAs with an expectation of there being little prospect of mobile deployment, only to be thwarted when mobile networks exercised their rights as priority users.

Figures 1-8 below illustrate the extent of our likely 6GHz sites (red) falling outside the HDAs (blue). 30

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Figure 1 – proposed HDAs vs VodafoneThree High-Config sites

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Figure 2 – Solent area

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Figure 3 – London area

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Figure 4 – South Wales area

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Figure 5 – Midlands area

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Figure 6 - Northwest England

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Figure 7 – Northeast England

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Figure 8 – Scottish central belt

Based on our analysis, if Ofcom doesn't accept our preferred strategy of adopting a maximalist approach to defining HDAs, then at the very least the proposed HDAs should be extended as follows:

1. Extension along principal motorways.
2. Extension along principal railway lines.
3. A general extension to widen all of the proposed areas.
4. The Solent areas to be widened/combined.
5. The London area to be extended to cover Reading to the Essex/Kent coast.
6. The South Wales areas to be combined
7. The West Midlands area to be extended, particularly covering the Cannock/Rugeley areas.
8. Nottingham and Derby (plus potentially Loughborough and Leicester) to be combined
9. The Liverpool/Manchester corridor to be extended as far north as Preston/Blackpool/M65 corridor
10. The Northeast areas to be combined and extended northwards to Morpeth and south-eastwards to cover Redcar.
11. Scottish areas to be extended and merged.

Question 2: Do you agree with our proposal to clear fixed links from the Upper 6 GHz band in and around high density areas, and to leave the band open to new fixed link licence applications outside of high density areas, subject to coordination)?

We agree with the proposal to adopt Option 1. We agree that it would be disproportionate to clear all incumbent fixed link usage of 6GHz where that usage has no impact on the HDAs required to provide mobile services (Option 2). We do not believe that Option 3 is workable in practice.

We are also supportive of permitting new usage, to the extent that it does not impact the deployment of mobile services. However, this aspect is contingent on Ofcom either taking a maximalist approach to defining HDAs, or at the least accepting the extensions that we set out in our response to Question 1 – absent this, there is a real prospect of new usage blocking the individual applications we would need to submit to deploy masts outside HDAs. Furthermore, any new deployments would need to work around any individual licences that Ofcom might issue for mobile deployments at individual masts outside HDAs (i.e. when considering whether a new fixed link should be permitted, Ofcom would need to assess coexistence both with HDAs, and individual mast deployments outside HDAs).

Question 3: Do you agree with the approach we have set out to identify the links which will be affected by the proposed revocation?

Overall, we agree with the stated parameters. However, given the mobile industry has been clear that a benefit of the 6GHz band is the prospect of 200MHz channels, we question why an assumption of 100MHz channels has been used.

Question 4: Do you agree with our proposal to remove access to the frequencies 7110–7125 MHz for PMSE use, but to retain the option of allowing users to “borrow” spectrum from the Upper 6 GHz band for occasional major events?

We agree in principle, but note that locations such as Silverstone are likely to be ones where there is high demand for 6G services (particularly on race days) so such “borrowing” may not be practicable. If there is a need to temporarily restrict mobile bandwidths in the area, this should be done equitably between the licensees rather than potentially focussing on restricting a single licensee's usage. We are very supportive

of the need to find a holistic approach to supporting PMSE, and note that 5G/6G solutions may be a tool in the arsenal to achieve this rather than direct access to spectrum.

Question 5: Do you agree with our proposal to require mobile base stations to protect RAS usage of the band at the levels specified?

We acknowledge the requirement. Our assumption that this requirement would be in the form of a Coordination Notice for the relevant licensee(s). As with any Coordination Notice, we would expect there to be dialogue between the incumbent and mobile licensees such that practical coexistence arrangements could be agreed rather than relying solely on theoretical models/default deployment architectures.

There may be some scope for use of the telescope to be time-shared with mobile use in a way which maximises the benefits to both systems. Depending on channel arrangements for the band, avoiding co-channel and adjacent channel usage of the 25.2MHz used by RAS is likely to result in MNOs not being able to operate in much larger spectrum blocks which would result in inefficient use of spectrum. Therefore, we wish to explore ways in which mobile use can be improved while still protecting RAS use. We believe that elements of this dialogue should take place prior to any spectrum award, to ensure that bidders are fully informed of the implications.

Question 6: Do you have any comments on how we should manage coexistence between mobile and any other users in the Upper 6 GHz band (i.e., RAS, EESS, SRDs, FSS and MOD use)?

No further comments.

Question 7: Do you have any comments on our assessment of the impacts of our proposals (to the extent not covered by previous questions)?

No further comments.

Question 8: Do you have any comments on our Equality impact assessment?

No further comments.

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

No further comments.