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By letter and email

cc: [☒ CONFIDENTIAL]

Dear Sir or Madam,

Final decision to revoke the 40 GHz 'Spectrum Access' licence held by UK Broadband Limited ([licence no. 0307344](#))

This notification contains important information about your licence. Please read it carefully.

Purposes of this notification

1. In accordance with [paragraph 7\(10\)](#) of Schedule 1 to the Wireless Telegraphy Act 2006 (the "Act"), we are writing to notify you that we have decided to revoke the 'Spectrum Access' licence authorising UK Broadband Limited to use the 41.00-42.00 GHz and 42.50-43.50 GHz frequency blocks (the "[UKB 40 GHz Licence](#)")¹. As set out in more detail below, we consider that this revocation is justified on spectrum management grounds. The revocation will take effect from **1 June 2028**.
2. In accordance with the statutory process for revoking wireless telegraphy licences, Ofcom has decided to revoke the [UKB 40 GHz Licence](#). We took this decision on 24 May 2023, having carefully considered all the representations made by UK Broadband Limited. **We are now giving you notice of Ofcom's final decision, and our reasons for it.** Please note that, in line with [paragraph 7\(11\)\(a\)](#) of Schedule 1 to the Act, we are sending you this notice within one week of making Ofcom's decision.

¹ [Licence no. 0307344](#)

Background

3. In 2008, UK Broadband Limited participated in an auction² of wireless telegraphy licences and was awarded the [UKB 40 GHz Licence](#).
4. Ofcom has a statutory power to revoke wireless telegraphy licences, where this is objectively justifiable ([paragraph 6A](#) of Schedule 1 to the Act). We also have a general duty not to discriminate unduly between operators, and to ensure that our interventions are proportionate, consistent and targeted only at cases in which action is needed.³
5. Under the terms of the [UKB 40 GHz Licence](#), and in accordance with [paragraph 8](#) of Schedule 1 to the Act, Ofcom may revoke the [UKB 40 GHz Licence](#) “for reasons related to the management of the radio spectrum, provided that in such a case this power to revoke may only be exercised after at least five (5) year’s notice is given in writing to the Licensee”.⁴
6. Under condition 3(h) of the UKB 40 GHz licence,⁵ as initially awarded in 2008, the 5-year notice period for revoking the licence for spectrum management reasons could not expire before February 2023. This condition was subsequently removed because the 15-year initial term had already expired.
7. In accordance with [paragraph 7](#) of Schedule 1 to the Act, if Ofcom proposes to revoke a wireless telegraphy licence, it must:
 - notify the licensee of the reasons for the proposed revocation;
 - specify a period (of at least 30 days) in which the licensee may make representations; and
 - decide whether or not to revoke the licence and notify the licensee of our decision within one month of the end of that period.
8. On Monday 20 March 2023, we gave UK Broadband Limited a notification of proposed revocation (the “**March 2023 Notification**”). In that notification we stated the reasons for the proposed revocation, referring to section 7 (“*Approach to existing licensees in the 40 GHz band*”) of Ofcom’s Statement and Consultation of 13 March 2023 entitled “[Enabling mmWave spectrum for new uses](#)” (the “**March 2023 Statement and Consultation**”). We also specified that UK Broadband Limited had until Friday 28 April 2023 to make representations about the proposed revocation.
9. On 28 April 2023, we received representations from Three UK (“**H3G**”), the owner of UK Broadband Limited.

² The [10 GHz, 28 GHz, 32 GHz and 40 GHz award](#).

³ Section [3\(3\)](#) of the Communications Act 2003.

⁴ Condition 3(f) of the [UKB 40 GHz Licence](#)

⁵ A draft licence was annexed to the [Information Memorandum](#), published 3 December 2007.

Our consideration of the representations made by H3G

10. In brief, H3G argued that we should not revoke the [UKB 40 GHz Licence](#) because H3G believes that:

- the revocation would affect licensees' expectations of how Ofcom will treat licences with initial terms in the future, with an impact on their future network investment [~~S~~ CONFIDENTIAL] across all mobile bands;
- Ofcom has not sufficiently justified why it cannot liberalise the spectrum and rely on trading/leasing;
- Ofcom has not sufficiently justified why it cannot rely on an incentive auction or a voucher scheme;
- Ofcom has not sufficiently justified why it cannot rely on liberalising the existing 40 GHz licences and imposing annual licence fees; and that
- Ofcom has not justified why it needs to revoke licences in the 40 GHz band rather than alternative options to release sufficient mmWave spectrum for 5G use.

11. We address each of these points in **Annex 1** to this notification.

Our final decision and the reasons for it

12. As specified in our March 2023 Notification, the reasons for this revocation are set out in full in our [March 2023 Statement and Consultation](#) (in particular, section 7). We published the [March 2023 Statement and Consultation](#) following a previous consultation that we published on 9 May 2022 (the "[May 2022 Consultation](#)"),⁶ in which we set out proposals for making the 26 GHz and 40 GHz available for new uses, including 5G.

13. In essence, having considered all responses to the [May 2022 Consultation](#) and the further representations made by H3G, we consider that the best way to achieve our objectives for making mmWave spectrum available for new uses, which are derived from our statutory duties, is to make the entire 40 GHz band available alongside and at the same time as the 26 GHz band by revoking existing licences and allocating new licences for high density areas.⁷ We consider that this option is more likely than alternative options we have considered⁸ to ensure an efficient allocation of this spectrum, and will maximise this spectrum's potential to deliver benefits for people and businesses in the UK. We expect an efficient allocation is likely to mean creating the opportunity for operators to acquire large,

⁶ Ofcom's consultation entitled "*Enabling mmWave spectrum for new uses*", published on 9 May 2022.

⁷ As set out in the [March 2023 Statement and Consultation](#) (paragraphs 3.59 and 3.69), we have decided to make available licences for (i) the top 2.4 GHz of the 26 GHz band (25.1-27.5 GHz) and (ii) the 3 GHz comprised in the 40 GHz band (40.5-43.5 GHz). The wider 26 GHz band includes the frequencies between 24.25 and 27.5 GHz.

⁸ The options that we have considered include varying the 40 GHz licences to enable existing licensees to deploy new uses in the band, including mobile. For a more detailed description of these options, see section 7 of the [March 2023 Statement and Consultation](#) (in particular, paragraph 7.25).

contiguous spectrum blocks. We consider that we cannot rely on trading to achieve an efficient allocation in this band, and that liberalising the incumbents' licences would be less likely to secure an efficient allocation than an award. A single auction making the large amounts of spectrum in the 26 GHz and 40 GHz bands available at the same time will, in our view, be the most effective way of securing efficient allocation of this spectrum and maximising its value for society in the coming years. Awarding the full band will also 'reset' the band for new uses going forwards, removing constraints from coexistence with fixed links that would severely limit the extent of deployment of mobile services, as well as allowing us to authorise the band differently in high and low density areas.⁹

14. In the [March 2023 Statement and Consultation](#) (section 7), we have also explained why we consider that this revocation meets the relevant legal tests set out above.
15. In addition to the reasons set out in the [March 2023 Statement and Consultation](#), we specify in Annex 1 how we have addressed the representations made by H3G in response to our March 2023 Notification.
16. In conclusion, for the reasons set out in the [March 2023 Statement and Consultation](#) (section 7) and those set out in Annex 1 in response to the representations made by H3G, we have decided to revoke the [UKB 40 GHz Licence](#). Accordingly, **the [UKB 40 GHz Licence](#) is revoked with effect from 1 June 2028.**

Next steps

17. As set out in the [March 2023 Statement and Consultation](#) (paragraph 7.8), we will offer to grant individual fixed link licences for links already in place at the time of publishing the [March 2023 Statement and Consultation](#), where these are not likely to receive harmful interference from new uses in high density areas. A more detailed description of this approach is set out in the [March 2023 Statement and Consultation](#) (paragraphs 7.170-7.176).
18. Should you have any questions on the matters set out in this notification, please contact Lara.Singer@ofcom.org.uk or Kirsty.Logan@ofcom.org.uk, copying mmWave.allocation@ofcom.org.uk.

Yours faithfully,



David Willis

⁹ See the [March 2023 Statement and Consultation](#), paragraphs 7.3 and 7.6.

Annex 1

Our consideration of the representations made by H3G

Unless otherwise stated, all the references contained in this annex (e.g. “§1”) are references to specific paragraphs from H3G’s response to the March 2023 Notification.

Summary of H3G’s representations

1. In summary, according to H3G (§93), a more proportionate approach would involve either:
 - “Varying existing licences to allow mobile use and relying on market mechanisms to allocate the spectrum efficiently” (§93a.) with “the option of auctioning the entire 3.25GHz of spectrum in the 26GHz band (or 3GHz if the MOD requires 200MHz)” (§93a.), instead of setting aside any spectrum for local users (§§67-68); or
 - implementing the voucher scheme proposed by H3G (§93b.).
2. Below, we summarise and address the specific arguments raised by H3G.

H3G’s argument that the revocation would affect licensees’ expectations of how Ofcom will treat licences with initial terms in the future, with an impact on their future network investment and trading incentives across all mobile bands

3. H3G argued that “Ofcom’s decision to revoke licences must clear a very high evidentiary bar” (§6) because licensees would “place much more weight on the risk that Ofcom will revoke spectrum licences, regardless of whether they consider themselves to be the highest value user” (§5) and consequently the revocation should be expected to have implications which are wider than just for 40 GHz (§5). In particular, in H3G’s view, the revocation risks undermining both:
 - the business cases for all licensees’ future network developments because “licensees will now be hesitant to deploy networks where the payback from doing so is uncertain before, or not expected until after, the time at which the initial term of the spectrum licence ends” (§5a.) and
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Ofcom’s response:

4. We do not agree with H3G’s suggestion that we have not met the “evidentiary bar” for revoking the UKB 40 GHz licence. As set out in the [March 2023 Statement and Consultation](#) (paragraph 7.33), Ofcom has a statutory power to vary or revoke spectrum licences, where this is objectively justifiable. We also have a general duty not to discriminate unduly between operators, and to ensure that our interventions are proportionate, consistent and targeted only at cases in which action is needed. In section 7 of the [March 2023 Statement and Consultation](#), we explained why we considered that revoking the 40 GHz licences would meet these legal tests. We have carefully considered the representations made by H3G in

response to the March 2023 Notification and for the reasons set out below we remain of the view that revoking the UKB 40 GHz licence is objectively justifiable and proportionate.

5. In response to H3G's comment above, we also note that:
 - a. Firstly, for the reasons as set out in the [March 2023 Statement and Consultation](#) (paragraphs 7.94-7.102), we consider that revoking the 40 GHz licences is consistent with our market-based approach to spectrum management. This approach was set out in our July 2021 Spectrum Strategy Statement,¹⁰ where we noted (paragraphs 2.18-2.19) that auctions are one of the market mechanisms we deploy as a way of enabling the market to decide the optimal allocation, and that there is an important and complementary role for Ofcom to play in ensuring the optimal use of spectrum when major changes are being contemplated and frequencies need to be recycled.
 - b. Secondly, to the extent that H3G is suggesting that the revocation of the UKB 40 GHz licence will change its investment incentives because H3G has been basing its investment decisions on the expectation that we would not exercise our power to revoke the 40 GHz licences, we note that, as set out in the [March 2023 Statement and Consultation](#),¹¹ we do not consider any of the existing 40 GHz licensees (or any potential new licensee) enjoys a legitimate expectation that we would proceed with any particular option as regards liberalisation or revocation of the 40 GHz band.
 - c. Thirdly, the function that we are exercising here is to decide whether it is objectively justifiable and proportionate to revoke the existing 40 GHz licences. When the initial term of other licences expire, we will consider whether it would be objectively justifiable and proportionate to revoke any such licence on a case-by-case basis.
6. In summary, we do not agree with H3G's claim that we should not revoke the UKB 40 GHz Licence on the basis that this decision will undermine the MNOs' future investment incentives, since we are acting in accordance with our duties and consistently with our policies.¹²

H3G's argument that Ofcom has not sufficiently justified why it cannot liberalise the spectrum and rely on trading/leasing

7. H3G (§§13-15) disagreed with Ofcom's view that there may be particular barriers to trading which could prevent the industry from reaching an efficient allocation of mmWave. H3G provided three main reasons (relating to trading complexity, incentives to trade, and differences in licence terms), which are summarised and addressed below.

¹⁰ [Supporting the UK's Wireless Future: our spectrum management strategy for the 2020s](#).

¹¹ Paragraphs 7.161-7.162. See also paragraph 7.102.

¹² We also note that, as set out in Ofcom's February 2023 [discussion paper](#), analysis we commissioned by CRA did not find a statistically significant relationship between longer licence duration and higher investment levels.

Ofcom's response:

8. As stated above, our view is that there is an important and complementary role for Ofcom to play in ensuring the optimal use of spectrum when major changes are being contemplated and frequencies need to be recycled. The main question is not whether there is a theoretical possibility that the market will reach an efficient allocation through trading, but whether we can rely on such an outcome occurring in practice. This is a matter that necessarily involves us exercising regulatory judgement, in light of the available evidence.
9. To put the matter in context, we note that in practice there is very little historical evidence of trading of mobile spectrum ([March 2023 Statement and Consultation](#), paragraph 7.71). We have seen only five trades of mobile spectrum to date,¹³ and only one of these was a purchase of a mobile spectrum licence between two MNOs¹⁴ which was neither a 'mandated divestment'¹⁵ nor limited to a like-for-like spectrum 'swap' for the purpose of defragmentation.¹⁶ In contrast, for trading to result in an optimal outcome in the present case, it could require voluntary selling of spectrum by an MNO (H3G) to other MNOs. Even where Ofcom has taken steps to address potential barriers to trading between mobile operators, by aligning the terms of the UK Broadband 3.4 GHz and 3.6 GHz licences with the terms of auctioned licences in the same bands, we have not to date seen a trade take place.¹⁷ In this light, we consider that the market reality we have seen to date suggests that, in determining which policy option is more likely to ensure optimal use of spectrum, it is appropriate to give weight to the barriers to trading that we have identified in the current case, rather than relying purely on the assumption that spectrum trading and leasing will "allow for the release of spectrum to those that value it most", as H3G suggested (§13).

(1) Trading complexity (§§16-17)

10. Firstly, H3G (§§16-17) disagreed with Ofcom's view that trading could require a number of complex, multilateral trades across both the 26 GHz and 40 GHz bands in order to reach an efficient allocation. H3G made the following representations in support of its view:
 - "40GHz could be traded or leased pre, during or post-auction" (§16a.).
 - "There are only three licence-holders in the 40GHz band for potential purchasers to negotiate with and there are likely to be a limited number of would-be traders" (§16b.).

¹³ See the [March 2023 Statement and Consultation](#), paragraph 7.71.

¹⁴ One of the trades was the sale of a mobile licence by a non-MNO (Qualcomm, which sold 40 MHz of L-band spectrum to Vodafone and H3G in 2015).

¹⁵ One of the five trades that we have seen so far was a partial trade of EE Limited's 1800 MHz ("Public Wireless Operator") licence to Hutchison 3G UK Limited, which was a mandated divestment of 1800 MHz spectrum as part of the conditions for the Orange/T-Mobile merger in 2010.

¹⁶ Two of the trades that we have seen in the past were like-for-like spectrum swaps. Both were between Vodafone and O2: in the 900 MHz band in 2018, and in the 3.4-3.8 GHz band in 2021.

¹⁷ See Ofcom's Statement "[Aligning licence terms in the 3.4-3.8 GHz band](#)", published October 2022.

- Ofcom could introduce a negotiation phase, as it did in the 3.6-3.8 GHz auction, if it had concerns about complexities resulting in less-than-optimal allocations post-auction, (§16c.).
- “Ofcom’s updated proposal to auction the 26GHz band in sub-national lots would remove any remaining complexity from the trading process”. H3G clarified that this is because it would expect transaction costs to be low, given that there would be “only a few potential traders and a manageable number of lots” (§17).

Ofcom’s response:

11. We set out in the [March 2023 Statement and Consultation](#) (paragraphs 7.64-7.74) why we consider that we cannot rely on trading to achieve an efficient allocation of the spectrum in the 40 GHz band. We reached this view taking account of both H3G’s submission that trading could take place *before* the auction¹⁸ and the possibility of trades taking place *after* the auction¹⁹, and having considered the number of existing and potential new licensees. We remain of the view that there is a material risk that complexity would be a barrier to trading even with a limited number of buyers and sellers.
12. We have considered H3G’s new suggestion that if we are concerned about “complexities resulting in less-than-optimal allocations post-auction” (§16c.) we could introduce a ‘negotiation phase’, similar to that which we included in the 3.6-3.8 GHz auction. We do not think that the complexities associated with trading to achieve an efficient allocation of mmWave spectrum would be likely to be resolved through a negotiation phase. The negotiation phase of the 3.6-3.8 GHz auction was one of the measures we included in the assignment stage of the auction of 3.6-3.8 GHz spectrum to facilitate defragmentation of the wider 3.4-3.8 GHz band (see paragraph 7.72 of the [March 2023 Statement and Consultation](#)), and, notwithstanding those measures, even the simple set of swaps required to achieve defragmentation of that band has not yet occurred, leaving the band fragmented.
13. In contrast, the complexity of trades required to ensure an efficient allocation of both mmWave bands derives not only from the fragmentation of the existing three licensees’ holdings in the 40 GHz band into six blocks, but also from the need to allocate the spectrum in this and the 26 GHz band efficiently among all prospective licensees for new uses. It is not clear that allowing a negotiation phase in the 26 GHz band would address the complexities of trading in the 40 GHz band.

(2) Trading incentives (§§18-29)

14. Secondly, in the [March 2023 Statement and Consultation](#) (paragraph 7.64) we referred to Ofcom’s view, as set out in the [May 2022 Consultation](#) (paragraph 7.41), that existing licensees may not have the incentive to trade with potential competitors, which could prevent efficient outcomes. As an example, we said that there may be a strategic benefit to

¹⁸ See the [March 2023 Statement and Consultation](#), paragraph 7.68.

¹⁹ See the [March 2023 Statement and Consultation](#), paragraph 7.64; see also paragraphs 7.71-7.73.

H3G in retaining its full 2 GHz of spectrum, even if it were unlikely to use all of it, in order to reduce the amount of spectrum available to other MNOs. H3G (§§18-29) disagreed with this example because any “40GHz licensee which retains more spectrum than for which it is the highest value [user] for strategic reasons would incur high costs and an uncertain payoff” (§18).

15. In addition, according to H3G, the suggestion that H3G could act strategically to withhold spectrum would be inconsistent with: (i) Ofcom’s reasoning for not imposing a precautionary cap on H3G in the mmWave auction (§§19a.-c.) and (ii) Ofcom’s view, expressed in relation to the 3.6-3.8 GHz auction, that H3G had incentives to trade (§19d.). In particular, H3G said that it disagreed with Ofcom’s reasons set out at paragraph 7.70 of the [March 2023 Statement and Consultation](#) for the following reasons:

- H3G “disagree with Ofcom’s high-level view that incentives to bid strategically in an auction are different from incentives to trade” (§21)
- According to H3G, Ofcom’s suggestion that, unlike the decision to retain spectrum which could be sold to a rival, “acquiring spectrum in an auction entails a substantial upfront capital investment which must be justified to investors” (paragraph 7.70(a) of the [March 2023 Statement and Consultation](#)), would be inconsistent with Ofcom’s rationale for charging annual licence fees “which is predicated on Ofcom’s view that mobile operators are responsive to the opportunity cost of holding spectrum” (§23).
- H3G “do not agree with the suggestion ... that strategic bidding is less likely in auctions than trading because the actions of other bidders are uncertain” (§24). Specifically, H3G said that in both cases, “an MNO looking to behave strategically will give up (or give up bidding on) the spectrum if another party bids or offers greater than β ”, where β is “the sum of the MNOs’ intrinsic value for a certain amount of spectrum and the strategic value of denying it to a competitor” (§§25-27). H3G added that that the “licensee’s knowledge about other parties’ behaviour has no impact on the likelihood of strategic behaviour ... in either case” (§27).
- H3G (§§28-29) said that it did “not recognise the distinction between trading places within a band and a change in overall spectrum holdings” noted by Ofcom at paragraph 7.70(b) of the [March 2023 Statement and Consultation](#). According to H3G (§29), Ofcom should have explained this distinction by reference to the scale of the changes in “relative capacity” (§28a.) or “finances” (§28b.) resulting from a trade.

Ofcom response:

16. We remain of the view that the question of whether there is a risk of strategic bidding in the auction is different from the question of whether H3G could have an incentive to retain a spectrum licence leading to a sub-optimal use of the spectrum. We recognise that in theory a firm which was indifferent between opportunity costs and direct costs, and which had perfect information, could have the same incentives in each case. However, in practice strategic bidding to win a spectrum licence in an auction would require a significant cash

outlay at the time of the auction, which would be visible to current and prospective investors.²⁰ In any case, as noted above, we have to date seen very few mobile spectrum trades, even where Ofcom has taken steps to facilitate such trades, and we do not consider it reasonable to assume that such trades would occur in the 40 GHz band in a timely fashion, or at all. In addition, we note that:

- a. The “high costs” of retaining spectrum which H3G mentioned relate to “[t]he opportunity costs of foregone revenues from trading plus ALFs” (§18 and footnote 7). However, if the 40 GHz licences were subject to annual licence fees (‘ALFs’), this would reduce their value to a buyer (by the amount of the ALFs), and hence would also reduce the opportunity costs to H3G of forgone revenues from trading the spectrum. Similarly, the “uncertain payoff” of retaining spectrum mentioned by H3G (§18) relates to the fact that use cases for mmWave are still emerging, so the benefit of denying 40 GHz spectrum to other mobile operators would be highly uncertain. However, this uncertainty also affects the value to potential users, and hence the opportunity cost of retaining a spectrum licence.
- b. It is not correct that Ofcom’s rationale for ALFs is predicated on a view that mobile operators are responsive to the opportunity cost of holding spectrum. H3G (and other MNOs) have previously argued that ALFs are not needed where spectrum is tradable because the opportunity cost gives MNOs sufficient incentive to hold or trade spectrum efficiently. We have consistently taken the view that ALFs remain appropriate because there is a risk that MNOs may not fully account for the opportunity cost of resources in their decisions and therefore may not use spectrum in the most profitable way.²¹
- c. Finally, H3G referred to Ofcom’s view that “Three has incentives to trade (in the context of the defragmentation of the 3.4-3.8 GHz band)” (§19d.). We expressed this view in our December 2018 Statement on the [‘Variation of UK Broadband’s spectrum access licence for 3.6 GHz spectrum’](#) (paragraphs 4.22-4.23) and our March 2020 Statement on the [‘Award of the 700 MHz and 3.6-3.8 GHz spectrum bands’](#) (paragraphs 6.60-6.61). However, we do not consider that our views on the 3.4-3.8 GHz band provide support for a view that we can rely on trading to secure an optimal allocation of the 40 GHz band.²² As set out in the [March 2023 Statement and Consultation](#) (paragraph 7.72), the trades that would be required to defragment the 3.4-3.8 GHz band are more straightforward than those that would be required to achieve an efficient allocation of mmWave spectrum. Following the 3.6-3.8 GHz award, H3G and at least one other MNO

²⁰ In addition, due to the current configuration of the band, H3G, by retaining its existing holdings of 2 GHz, would be able to prevent any other operator from acquiring more than 500 MHz of contiguous spectrum in the 40 GHz band. In an auction, it would need to acquire an additional 500 MHz to achieve this result.

²¹ See, for example, paragraphs 5.44 to 5.47 of Ofcom’s Statement [‘Annual Licence Fees for 900 MHz and 1800 MHz frequency bands’](#) of December 2018, and paragraphs 5.20 and 5.21 of Ofcom’s Statement [‘Annual Licence Fees for 2100 MHz spectrum’](#) of December 2021.

²² While it is not essential to our reasoning, we would expect a cash sale of spectrum to be at least as complex as a like-for-like spectrum swap. In practice, we have seen two such spectrum swaps in the past, but only one cash sale between MNOs which was not a mandated divestment (see paragraph 9 of this annex).

told us that they had had difficulties in agreeing trades in the band due to the disparity between the terms of auctioned licences and the terms of the UKB Licences. As noted above, we have now aligned the terms relating to ALFs in the licences in the 3.4-3.8 GHz band to reduce barriers to trading. However, to date no further trading has occurred in the band.

(3) Differences in licence terms (§30)

17. Finally, H3G (§30) said that Ofcom has not explained why the differences in licence terms would act as a barrier to trading in the 40 GHz band. In particular, H3G said that since the liberalisation of existing licences would require a licence variation, “Ofcom could easily also vary the licence term at the same time to make the terms of the 40GHz licences consistent with the 26GHz licences” (§30).

Ofcom response:

18. In our [May 2022 consultation](#) (paragraph 3.14) and our [October 2022 statement](#) (paragraph 3.2) about ‘[Aligning licence terms in the 3.4-3.8 GHz band](#)’, we said that differences in licence terms could potentially act as a barrier to spectrum trading, by leading to a complex and protracted negotiation and unnecessary transaction costs. In the [March 2023 Statement and Consultation](#) (paragraph 7.71), we said that this is also likely to be the case for 40 GHz, because the trades that would be required would need to relate to spectrum in different bands, of different amounts, and with different licence terms and conditions. To clarify, if we varied all 40 GHz licences to enable existing licensees to deploy new uses in the band, including mobile (option 1), it is possible that in some cases MNOs could have acquired 40 GHz spectrum by “swapping” their licences in other mobile bands for the 40 GHz licences. However, an efficient allocation of mmWave spectrum would likely require at least some sales which would not be like-for-like spectrum ‘swaps’. As noted at paragraph 9 above, we have seen only five trades of mobile spectrum to date, only one of these was a purchase of a mobile spectrum licence between two MNOs which was neither a ‘mandated divestment’ nor limited to a like-for-like spectrum ‘swap’.

H3G’s argument that Ofcom has not sufficiently justified why it cannot rely on an incentive auction or a voucher scheme

19. In brief, H3G (§§31-58) disagreed with Ofcom’s reasoning for not pursuing the alternative options involving an incentive auction or voucher scheme proposed by H3G, which we set out at paragraphs A8.7- A8.11 of [Annex 8](#) to the [March 2023 Statement and Consultation](#). In response to our March 2023 Notification, H3G focussed on its preferred version of a voucher scheme, under which (i) any existing licensee must agree to the revocation of its existing 40 GHz licence, without being given the minimum 5-year notice period (§§51-52), in order to participate in the auction (§§32c.i. and 55) and (ii) “the licence would be revoked without compensation” if existing licensees do not participate in the auction (§32c.ii.) (“**H3G’s preferred version of a voucher scheme**”). H3G’s arguments are summarised and addressed below.

(1) Incentives to participate in H3G’s preferred version of a voucher scheme (§37)

20. In the [March 2023 Statement and Consultation](#) (paragraph A8.8(a) of [Annex 8](#)), Ofcom noted that “in the voluntary versions of the incentive auction or voucher scheme proposed by H3G, it is not clear that incumbents would have a sufficient incentive to participate, and relinquish spectrum”. H3G said that this consideration would not be relevant to H3G’s preferred version of a voucher scheme since under that version “40GHz licensees would be strongly incentivised to participate in the auction as their licence would be revoked without compensation if they did not” (§37).

Ofcom’s response:

21. As noted in the [March 2023 Statement and Consultation](#) (paragraphs A8.3-A.8.4 of [Annex 8](#)), in its response to the [May 2022 Consultation](#) and subsequent engagement with Ofcom, H3G made a number of alternative proposals relating to different forms of incentive auctions or voucher schemes. Specifically, H3G proposed:

- a. an incentive auction;²³
- b. a voluntary version of the voucher scheme where existing licensees would have the opportunity to put their existing spectrum into the auction in exchange for vouchers to spend in the auction;²⁴ and
- c. an alternative version of the voucher scheme where existing licensees would have their licence revoked if they did not consent to putting their spectrum in the auction, and “ALF would be payable during notice period”.²⁵

22. As H3G noted in response to the March 2023 Notification (§37), our comments about incentives to participate at paragraph A8.8(a) of [Annex 8](#) to the [March 2023 Statement and Consultation](#) did not relate to the version of the voucher scheme that is H3G’s current preferred option. Those comments were clearly intended to apply in relation to “the voluntary versions of the incentive auction or voucher scheme proposed by H3G” (paragraph A8.8(a) of [Annex 8](#)).

(2) Benefits of H3G’s preferred version of a voucher scheme (§§38-48)

23. In the [March 2023 Statement and Consultation](#) (A8.8(b) of [Annex 8](#)), Ofcom said that “we do not consider that the version of a voucher scheme proposed by H3G where incumbents are, in essence, forced to put their existing holdings into the auction, would give rise to any benefits over and above option 2, other than that of providing the existing licensees with the opportunity to profit from giving up their licences”. H3G disagreed with this view, arguing that:

²³ [H3G response](#) to the May 2022 Consultation, p.8.

²⁴ [H3G response](#) to the May 2022 Consultation, p.27.

²⁵ [H3G submission of 12 October 2022](#), slide 11.

- “one of the main benefits of the voucher scheme (...) is that it is a far less interventionist method of achieving an optimal spectrum allocation” (§38) because under such scheme “existing licensees decide how much spectrum to give up, based on the relative valuation of that spectrum for new uses” (§39).
- This distinction would be particularly important for MBNL’s spectrum since under H3G’s preferred version of a voucher scheme “MBNL would have the opportunity to hold on to the spectrum under the voucher scheme where it is the highest value user, and could avoid unnecessarily moving its fixed links outside of the band” (§40). H3G acknowledged that “it would be unlikely for MBNL to keep its duplex configuration once the band has been replanned post-auction”, but noted that “there may be other technologies (e.g. the technology underpinning self-backhauling) which allows mobile backhaul to be used without relying on a duplex split” (§40 and ft. 12).
- H3G’s preferred version of a voucher scheme would also help solve the issue of “whether it is objectively justifiable for Ofcom to impose large costs to force MBNL out of the band [REDACTED CONFIDENTIAL]
- The payments made to existing licensees under H3G’s preferred version of a voucher scheme would mitigate the financial impact on the MNOs’ ability to invest in other programmes, such as their 5G rollout (§48).

Ofcom’s response:

24. We remain of the view that in the case of a truly voluntary incentive auction – i.e. where incumbents have the option of retaining their licences and not participating in the auction - it is not clear that licensees would have sufficient incentives to relinquish spectrum and participate in an auction.²⁶
25. In relation to H3G’s preferred version of a voucher scheme, which would be different from a truly voluntary incentive auction,²⁷ we note that H3G presented its preferred version of a voucher scheme as “far less interventionist” and “therefore, more proportionate” (§38) than Ofcom’s proposed approach of revoking the 40 GHz licences and awarding new 40 GHz licences in an auction. However, under H3G’s scheme the 40 GHz licences would be revoked whether or not the licensee chooses to participate in the auction.

²⁶ [March 2023 Statement and Consultation, Annex 8](#), paragraph A8.8.

²⁷ An important function of a typical incentive auction is to determine the price at which existing licence holders would be prepared to *voluntarily* surrender their licences (see, for example, the Federal Communications Commission’s explanation of the function of the “reverse auction” component of the broadcast incentive auction, at <https://www.fcc.gov/about-fcc/fcc-initiatives/incentive-auctions/how-it-works>). H3G’s preferred version of a voucher scheme would not perform the same function because existing licence holders would be presented with the options of either participating in the award or having their licences revoked “without compensation”. Therefore, as H3G recognised (§§32 and 37), licensees would be strongly incentivised to participate in the auction, as their licence would otherwise be revoked “without compensation”.

26. We remain of the view that H3G’s preferred version of a voucher scheme would not give rise to any benefits over and above our preferred approach, other than the benefit to existing licensees of providing them with the opportunity to be compensated for giving up their licences. As noted in the [March 2023 Statement and Consultation](#) (paragraph 7.151), as we are giving licensees reasonable periods of notice in accordance with the terms and conditions of their licences, providing 40 GHz licensees with compensation would be inappropriate.

27. While we recognise there could be a slight advantage to avoiding the 5 year revocation period, in practice we do not think this would give rise to significant benefits. This is because (i) we consider that if award winners wanted to deploy in advance of this, they could potentially do so via commercial arrangements with incumbents,²⁸ (ii) in any case, we are consulting on methods for coordinating new and existing users of this spectrum during the revocation period, and (iii) MBNL is the only incumbent user of the band whose existing use of the spectrum is likely to significantly restrict the award winner’s use of the spectrum during the 5 year revocation period. H3G acknowledged (footnote 16) that even in H3G’s preferred version of a voucher scheme there would need to be a way of coordinating MBNL’s exit from the band with its use by new licensees. H3G also recognised that MBNL would be unlikely to keep its duplex configuration following the auction (§40 and ft. 12). H3G suggested that MBNL might be able to use 40 GHz spectrum without the use of a duplex split. We note that if this were technically achievable, it is open to MBNL to acquire spectrum in our planned auction for this purpose.

28. [REDACTED]²⁹

(3) Auction complexity and timeframes (§§49-52)

29. In the [March 2023 Statement and Consultation](#) (paragraph A8.8(c) of [Annex 8](#)), Ofcom said that an “incentive auction or voucher scheme would involve more stages than the auction formats we are currently considering, and there is a risk that resolving the complexities this entails would result in a longer timeline for awarding the spectrum”. H3G said that it disagrees with Ofcom’s view for the following reasons:

- Ofcom has not explained why H3G’s preferred version of a voucher scheme would delay the award materially compared to the revocation of existing licences (§50).
- H3G’s preferred version of a voucher scheme “would lead to timelier 40GHz deployments than Ofcom’s option” because “licensees would forfeit their licences as a

²⁸ [March 2023 Statement and Consultation](#), footnote 147.

²⁹ As we set out in paragraph 7.145 of the [March 2023 Statement and Consultation](#), “Although we acknowledge that they are non-trivial, we remain of the view that the estimated costs of clearing fixed links in the 40 GHz band are proportionate in light of the potential benefits of clearing the band for securing optimal use of spectrum and securing benefits for citizens and consumers, as set out in this section (from paragraph 7.37). The costs of clearing fixed links to make the band available for mobile are transitory in nature. The benefits of making the band available for mobile, while not quantifiable at this point, will benefit a large number of citizens and consumers and will be enduring.”

condition of entering the auction, meaning that award-winners would be able to immediately access the spectrum post-auction” (§51). However, H3G acknowledged that “there would need to be a way of coordinating MBNL’s exit from the band with its use by new licensees, in the event that MBNL did not retain its current holding” (§52, ft. 16).

Ofcom’s response

30. We noted in the [March 2023 Statement and Consultation](#) (paragraph A8.9 of [Annex 8](#)) that H3G’s voucher scheme would involve more stages and potentially more participants than the auction formats we are currently considering, and there is a risk that resolving the complexities this entails would result in a longer timeline. It is difficult to be more precise about what complexities may arise from H3G’s preferred version of a voucher scheme as it is a novel format. As an illustrative example, H3G’s preferred version of a voucher scheme would insert an element of uncertainty into the auction, and the auction design, because Ofcom could not start the statutory process for revoking any 40 GHz licence until the 40 GHz licensees specify whether or not they intend to participate in the auction. If Ofcom proceeded before concluding the revocation process, this means that when the bidding starts there might be uncertainty as to which frequencies in the 40 GHz band would be available in the auction.
31. For the reasons given in paragraph 27 above, we do not consider that the voucher scheme would enable a more timely deployment of new services than could be achieved through our proposed approach.
32. Considering these issues in the round, we remain of the view that an incentive auction or a voucher scheme would have significant disadvantages, and at best limited advantages, compared to the option of revoking and auctioning all licences in the band.
33. In addition, there would be a significant impact on auction timing should Ofcom need to be granted legal powers to run an incentive auction or a voucher scheme. We discuss this below.

(4) Ofcom’s powers to implement H3G’s preferred version of a voucher scheme (§§53-58)

34. In the [March 2023 Statement and Consultation](#) (§§A8.10- A8.11 of [Annex 8](#)), Ofcom said that “it is not at all clear to us that we do have the powers to implement H3G’s proposals”, noting that the approach suggested by H3G would not be a legitimate use of our powers because the specific circumstances in which the payment mechanism set out in s.14(5A) of the Wireless Telegraphy Act 2006 (the “Act”) is intended to apply are not applicable here. H3G said that it disagrees with Ofcom’s view for the following reasons:
 - In H3G’s view, the only requirement to be met under s.14(5A) of the Act is that the licence acquired must be a “surrendered spectrum licence” (as defined in s.12(8)), and “that requirement would be met if Ofcom were to specify that any existing licensee must agree to the revocation of its existing 40GHz licence in order to participate in the auction” (§§54-55)

- “There is nothing within Section 12(8) to indicate that the limit must be permanent or imposed for any particular reason” (§55).

Ofcom’s response:

35. We agree with H3G’s comment that the limit set out in s.12(8)(b) of the Act (i.e., “a limit applying to frequencies in respect of which a person may hold licences”) does not need to be “permanent”. However, as noted in the [March 2023 Statement and Consultation](#) (paragraph A8.10 of [Annex 8](#)), the “zero cap” on 40 GHz spectrum proposed by H3G would stop applying when any qualified applicant (i.e., qualified to participate in the award process) starts bidding, which is the stage of the award process where spectrum caps are normally intended to apply. In our view, this suggests that the “zero cap” proposed by H3G would essentially seek to avoid the statutory rules about the destination of auction proceeds set out in sections [400](#) and [401](#) of the Communications Act 2003, rather than imposing a genuine limit to the mmWave frequencies that the existing 40 GHz licensees can be licensed to use. Therefore, for the reasons set out in the [March 2023 Statement and Consultation](#) (paragraphs A8.10- A8.11 of [Annex 8](#)), we remain of the view that using the payment mechanism set out in s.14(5A) of the Act as suggested by H3G would not be a legitimate use of our powers.

36. H3G added that “if Ofcom remains of the view that it cannot run a voucher scheme under the current legal framework, the required legal powers can be readily granted” and referred to the necessary steps which “were taken back in 2012-15 after DCMS issued a consultation paper seeking views on whether to introduce legal powers for Ofcom to run incentive auctions” (§57). In our view, it is not obvious that the powers to run a voucher scheme as the one proposed by H3G would be “readily granted”. These powers would require legislative changes and the fact that Government proposed to give Ofcom the powers to run incentive auctions almost 10 years ago³⁰ (without such powers being ultimately given to Ofcom) does not necessarily mean that such powers would now be proposed by Government and easily granted by Parliament. In addition, regardless of the degree of complexity involved in a potential legislative process, we do not consider it appropriate to delay our decision as to the revocation of the existing 40 GHz licences and the award of new 40 GHz licences until Ofcom is given the powers to run incentive auctions because the required legislative process is not within Ofcom’s control.

H3G’s argument that Ofcom has not sufficiently justified why it cannot rely on liberalising the existing 40 GHz licences and imposing annual licence fees

37. H3G (§§59-64) argued that Ofcom has not properly considered the imposition of annual licence fees as an alternative to licence revocation. In particular, H3G made the following arguments:

³⁰ See DCMS’ paper of July 2013 entitled [“Connectivity, Content and Consumers Britain’s digital platform for growth”](#), pages 8 and 19.

- If the current 40 GHz allocation may be inefficient for new users, Ofcom should “first consider introducing ALFs (which were due from Feb 2023) to remedy this issue” (§62).
- Ofcom has failed to properly consider H3G’s suggestion (in response to the May 2022 Consultation) to impose annual licence fees as an alternative to licence revocation (§§59-60).
- If Ofcom “no longer trusts that ALFs can secure optimal use of spectrum ... it should abolish the fees and relieve the industry of an annual £320m ALF bill” (§64).

Ofcom’s response:

38. We disagree that we have not properly considered H3G’s suggestion that we impose ALFs as an alternative to licence revocation.
39. As noted in the [March 2023 Statement and Consultation](#) (paragraphs 7.13 and 7.179), Ofcom has been able to use its powers to impose annual licence fees on the 40 GHz licences since 21 February 2023. In our [Consultation on annual licence fees for 10 GHz, 28 GHz and 32 GHz spectrum](#) (paragraph 2.1 and ft. 1) and the [May 2022 Consultation](#) (paragraph 7.90), we said that we would consult on setting annual licence fees for the 40 GHz band once we decide on the future of these licences. Were we not to revoke the 40 GHz licences, they would be subject to ALFs set at an estimate of market value. This would also be in line with our view in the [March 2023 Statement and Consultation](#) (paragraph 7.143) that “under option 1 licensees would not be subject to clearance costs, but would likely be subject to annual licence fees”. Option 1 that we considered is therefore equivalent to H3G’s suggestion (set out in §10c. of H3G’s representations) that we liberalise licences and impose ALFs. Its alternative (set out in §10a. of H3G’s representations) that we liberalise licences without applying ALFs would not be consistent with our policy of setting ALFs for mobile spectrum after its initial licence term.
40. We do not think it would be appropriate to introduce ALFs and wait to see whether an efficient allocation results. This is because, as set out in the [March 2023 Statement and Consultation](#) (paragraphs 2.42-2.43 and 2.68-2.76), we consider that mmWave spectrum should be made available in a timely manner for new uses and that making the 26 GHz and 40 GHz bands available for new uses on a similar timeframe, and as part of the same award, is most likely to deliver positive outcomes for people and businesses, given that we expect the two bands will become functionally substitutable.³¹ In particular, we explained in paragraph 2.74(c) of the [March 2023 Statement and Consultation](#) why we consider that delaying making a decision on the 40 GHz band would be less likely to result in optimal use of this spectrum, relative to the option of authorising both bands together for new uses on the same or similar timeframe.
41. In the [March 2023 Statement and Consultation](#) (paragraph 7.94), we noted H3G’s argument that if Ofcom no longer trusts that ALFs can deliver optimal use of spectrum, it should stop

³¹ Paragraph 2.43 of the [March 2023 Statement and Consultation](#).

setting them. As set out in Ofcom's recent [Statement on ALFs for 10 GHz, 28 GHz and 32 GHz spectrum](#) (paragraph 2.6), the purpose of setting AIP (including ALFs) is to provide licence holders with a long-term signal of the opportunity cost, or market value, of the spectrum, in order to promote the optimal use of spectrum in line with our duties.

H3G's argument that Ofcom has not justified why it needs to revoke licences in the 40 GHz band rather than alternative options to release sufficient mmWave spectrum for 5G use

42. H3G argued that "Ofcom has not sufficiently justified taking the intrusive approach of setting aside a large proportion of the 26GHz band for local users" (§68) and that "a more proportionate approach would be to, instead, auction the entire 26GHz band" (§67). In support of this argument, H3G raised three main points, which are summarised and addressed below.

(1) Market failure (§§69a. and 71-76)

43. Firstly, H3G argued that "Ofcom has failed to satisfactorily evidence why local users would not be able to access 26GHz spectrum at auction like every other party" (§71). In particular, H3G said that Ofcom should have provided more evidence of "its expectation for the geographical demand for mmWave spectrum for local users" and assessed "the extent to which a band manager could be used to gauge and aggregate market demand" (§73). H3G also said that while they "agree that demand may be uncertain at this stage, the same issue applies to bidders for wide area licences in the auction" (§76).

44. H3G also said that "Trading, leasing, Local Access Licensing and Shared Access Licensing in other bands are all viable alternatives to accessing set aside spectrum if any party (local or national) misses out on the spectrum at auction for which they subsequently become the highest value user" (§76).

Ofcom's response:

45. **Geographic demand for mmWave spectrum for local users:** We explained in paragraph 2.41 of the [March 2023 Statement and Consultation](#) why we consider making this spectrum available for a range of different users is important:

"There is particular potential for investment and innovation in new uses of mmWave spectrum for a variety of different purposes by a broad range of users with diverse business models. This spectrum is likely to be important to support continued growth in existing mobile services, gigabit fixed broadband, as well as the development of new and innovative services. We consider that supporting opportunities for innovation and investment in new mmWave services by a diverse set of users will be important to ensure ongoing optimal use of the spectrum and maximise benefits from the spectrum to society."

In addition, we note that we consulted on our proposal to make some 26 GHz spectrum available for local users in high density areas, and this proposal received support from

consultation respondents, including from two mobile network operators (VMO2 and Vodafone).³²

46. **Use of a band manager:** As set out in section 3 of the [March 2023 Statement and Consultation](#) (paragraph 3.31), given the highly localised deployments by local users and the disparate nature of these operators, we do not consider it appropriate to expect local users to bid in an auction for citywide licences, or to come together and coordinate a band manager. In particular, this is because the commercial potential of mmWave is still emerging, so demand from many local users will not materialise until after the auction. We do not agree with H3G that this is also the case for wide area licensees. Although potential wide area licensees' precise use cases and spectrum requirements may still be developing, they are aware at this stage of their need to obtain mmWave spectrum in the auction (as demonstrated by their engagement with our May 2022 Consultation).
47. **Trading, leasing, Local Access licensing and Shared Access licensing in other bands:** Ofcom's trading, leasing and Local Access licensing frameworks are all intended to help secure efficient use of spectrum. However, we consider that making some spectrum available on a Shared Access basis in high density areas is more likely to result in efficient use of this spectrum than relying solely on these mechanisms. As set out in paragraph 3.18 of the [March 2023 Statement and Consultation](#), our Local Access licences are for a fixed 3 year term (unless otherwise agreed with the wide area licensee), which is likely to be a barrier for longer term investment. Shared Access licences provide operators with greater certainty for investment, without the need to reach commercial agreements with an MNO. We address Shared Access licences in other bands as an alternative to making spectrum available in 26 GHz at paragraph 52 of this Annex.

(2) Cost-benefit analysis (§§69b. and 77-84)

48. Secondly, H3G said that Ofcom should have assessed the possible scale of the costs and benefits of setting aside a large amount of 26 GHz spectrum for local users (§§77-79) and it should have justified "why it has chosen to set aside 850MHz, and then 650MHz, rather than a different value" (§83).

Ofcom's response:

49. H3G's concern relates to our decision to make local access licences available on a first come, first served basis, using our Shared Access licensing framework, in the 24.45-25.10 GHz range in high density areas (see paragraphs 3.7-3.12 and 3.34-3.35 of the [March 2023 Statement and Consultation](#)). As set out in the [March 2023 Statement and Consultation](#) (paragraph 3.26), in response to the May 2022 Consultation, we saw evidence of demand for mmWave spectrum for a range of different uses, including mobile networks, FWA and mobile private networks. In light of these responses, we consider it appropriate to enable opportunities for a diverse set of users to access the spectrum for investment and

³² See paragraphs 3.21-3.33 of the [March 2023 Statement and Consultation](#)

innovation across the country, in both urban and rural areas, which we consider important to maximise the benefits from mmWave spectrum. This is consistent with our recently published spectrum strategy³³ and mobile demand strategy.³⁴

50. At this early stage in the development of use cases for mmWave spectrum, it is not possible to know with certainty how much spectrum will be required in high density areas by local users. As explained in the [March 2023 Statement and Consultation](#) (paragraphs 3.34-3.45), in light of the evidence we received in response to the May 2022 Consultation, we consider that making 650 MHz of 26 GHz spectrum available for local users, and 2.4 GHz of 26 GHz spectrum for wide area users will enable local users to access an appropriate amount of the spectrum in high density areas, while not risking the benefits that are likely to result from wide area operators having access to large blocks of spectrum.³⁵ In particular, we explained that 650 MHz is within the early indications of demand (200 MHz-1 GHz, as set out in paragraph 2.41 of the [May 2022 Consultation](#)) and that the GSMA reports 150-400 MHz will be required for an enterprise network (i.e. mobile private network).³⁶ In addition, 650 MHz would allow for multiple users to deploy in a particular location and/or a single local user to access larger bandwidths for use cases that require more than 400 MHz.³⁷

(3) Alternative bands (§§69c. and 85-91)

51. Finally, H3G argued that Ofcom has not sufficiently assessed alternative options to “setting aside a large portion of the 26 GHz band for local users” (§68), for example “directing users to other, lightly used Shared Access band or re-allocating spectrum in other bands” (§§69c. and 85). In particular, H3G said that:

- “Ofcom has not provided evidence to suggest, that there is sufficient local area demand specific to mmWave spectrum in high density areas”. In H3G’s view, the “demand in these areas appears to be primarily for FWA services which can and are easily provided over other spectrum bands (most commonly C-Band)” (§88).
- “To the extent that mmWave spectrum is required, Ofcom has provided no evidence that it cannot set aside spectrum in the 39-40GHz instead” (§89).

Ofcom’s response:

52. **Use of alternative spectrum bands:** As set out in the [March 2023 Statement and Consultation](#) (paragraphs 2.5-2.6), we consider that mmWave spectrum has strong potential to support the development of innovative services using mobile technology, and use cases

³³ See Ofcom’s 2021 spectrum strategy document “[Supporting the UK’s wireless future](#)”, where we set out our goals to support wireless innovation and ensure our licensing is fit for local and national services (see, e.g. p. 16).

³⁴ See Ofcom’s December 2022 statement, “[Ofcom’s future approach to mobile markets and spectrum](#)”, where we explained that we want to see innovation and investment in new technologies.

³⁵ Paragraph 3.45 of the [March 2023 Statement and Consultation](#).

³⁶ GSMA, “[Vision 2030: mmWave Spectrum Needs](#)”, published June 2022.

³⁷ See paragraph 3.40 of the [March 2023 Statement and Consultation](#).

are developing. We expect mmWave spectrum to support highly localised enterprise applications and innovation through the deployment of this spectrum in mobile private networks (paragraph 3.5) and our approach to authorisation of this spectrum has been designed to enable both wide area and local users to access mmWave spectrum. We consider that the high speeds and high capacity which mmWave spectrum offers means it will not always be possible to provide such applications using alternative spectrum.

53. **Use of 39-40 GHz for local users:** We have considered H3G’s suggestion that we could have instead made spectrum in the 39-40 GHz band available for local users. In this regard, we note that the 26 GHz band has been adopted as a pioneer band for 5G in Europe with harmonised technical conditions set out in the “26 GHz Decision”,³⁸ which are now part of UK law.³⁹ In addition, CEPT has published technical conditions for mobile use of the 40.5-43.5 GHz band and the Electronic Communications Committee has published a decision reflecting CEPT’s harmonised conditions.⁴⁰ The 39-40.5 GHz band has not been harmonised for mobile use in this way in Europe.

Mitigation

54. As set out in section 7 of the [March 2023 Statement and Consultation](#), we also decided to start the process for revoking MBNL’s and MLL’s licences to use 40 GHz spectrum. We note that having considered the representations made by MBNL in response to our proposal to revoke its 40 GHz licence, we have decided to offer the following mitigation to MBNL.
55. We will offer to grant MBNL individual temporary fixed link licences starting on 1 June 2028 and expiring on 1 January 2030, in respect of up to 500 fixed links which are outside the top 10 high density areas, Dover, Folkestone & Hythe and Stansted Airport, and in relation to which MBNL provides suitable evidence to Ofcom that despite MBNL’s reasonable efforts, the installation of the replacement link/fibre connection has been delayed for reasons outside of MBNL’s reasonable control.
56. We have considered whether it would be appropriate to offer a similar form of mitigation to H3G, and decided it would not. This is because our decision to offer the mitigation to MBNL was made on the basis of MBNL’s representations about (i) the number of existing fixed links it has in the 40 GHz band⁴¹, (ii) its choice to replace those links with fibre wherever possible,

³⁸ Commission Implementing Decision (EU) 2019/784 of 14 May 2019 on harmonisation of the 24,25-27,5 GHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services in the Union. See consolidated text. This decision has been developed on the basis of studies conducted by CEPT in ECC Decision (18)06 on the harmonised technical conditions for Mobile/Fixed Communications Networks (MFCN) in the band 24.25-27.5 GHz, as amended on 20 November 2020.

³⁹ Decision 2019/784 and Decision 2020/590 continue to be part of UK law, following Brexit, by virtue of section 3 of the EU Withdrawal Act 2018.

⁴⁰ See [ECC Decision 22\(06\)](#)

⁴¹ In MBNL representations, MBNL states that it has [REDACTED] live links in the band. We note that as explained at paragraph 7.171 of the [March 2023 Statement and Consultation](#), we are consulting on the method for

and (iii) MBNL's representations about how long it might take to replan and re-deliver its network using fibre. As only around 60 of H3G's 40 GHz fixed links will need to be replaced as a result of this decision, we do not consider it necessary to offer a similar form of mitigation to H3G.⁴²

identifying fixed links that are likely to receive interference from mobile deployments, but under the method we consulted on, 3,262 of MBNL's links would need to be cleared.

⁴² We also note that as approximately 45 of H3G's 40 GHz fixed links are in and around the top 10 high density areas, Dover, Folkestone & Hythe and Stansted Airport, a similar mitigation is unlikely to be very useful to H3G, as it would only apply to approximately 15 of its links.