PUBLIC VERSION

CROSS-SUBMISSION OF 2DEGREES TO THE COMMERCE COMMISSION REGARDING SUBMISSIONS BY THE PARTIES ON THE STATEMENT OF ISSUES RELATING TO ONE NZ'S PROPOSED ACQUISITION OF SPECTRUM FROM DENSE AIR

Dated 22 March 2024

INTRODUCTION

1. 2degrees refers to:

1.1 The Commerce Commission's (**NZCC's**) Statement of Issues dated 2 February 2024 (the **SOI**) regarding the clearance application by One NZ relating to the proposed acquisition of spectrum from Dense Air (the **Proposed Acquisition**);

1.2 The submission by One NZ dated 5 March 2024 in response to the SOI (the **One NZ Submission**);

1.3 The submission by NERA on behalf of One NZ dated 5 March 2024 in response to the SOI (the **NERA Submission**);

1.4 The submission by Dense Air dated 4 March 2024 in response to the SOI (the **Dense Air Submission**); and

1.5 The submission by Brattle Group on behalf of Dense Air dated 4 March 2024 in response to the SOI (the **Brattle Group Submission**).

2. 2degrees focuses in its cross-submission below on responding to the following key submissions made by One NZ, Dense Air and their external economists as follows:

2.1 Why neither 2degrees nor the NZCC have maintained that parity of spectrum holdings is the test to apply when considering whether competition would be substantially lessened in a market from the Proposed Acquisition[1];

2.2 Why it is incorrect that 2degrees determined [**Redacted**] in the bidding process for Dense Air's spectrum, thereby indicating that 2degrees did not see [**Redacted**][2];

2.3 How the concerns 2degrees has previously raised with the Commission around threats to its business from insufficient spectrum have subsequently materialised[3];

2.4 Why it is not the case that 2degrees has alternative means of expanding its broadband offering which are feasible[4];

[1] For instance, contrary to [1.9-1.10, 4.2, 4.9, 5.1, 5.15 and 5.18] of the One NZ Submission.
[2] For instance, contrary to [1.4-1.5, 2.3] of the One NZ Submission.
[3] For instance, contrary to [1.12, 2.4] of the One NZ Submission.
[4] For instance, contrary to [4.6, 7.18-7.29] of the One NZ Submission.

2.5 How 2degrees is intending to use the Dense Air spectrum to roll out a national 4G FWA offering[5]; and

2.6 Why 2degrees is not "*overweight*" on spectrum relative to the size of its market share, whereas One NZ is "*underweight*".[6]

3. This cross-submission is not meant to be exhaustive. 2degrees' concerns with the Proposed Acquisition have already been set out in its previous submissions on the Statement of Preliminary Issues and the SOI – those concerns have not changed.

WHY NEITHER 2DEGREES NOR THE NZCC HAVE MAINTAINED THAT PARITY OF SPECTRUM HOLDINGS IS THE TEST TO APPLY WHEN CONSIDERING WHETHER COMPETITION WOULD BE SUBSTANTIALLY LESSENED IN A MARKET FROM THE PROPOSED ACQUISITION

4. The One NZ Submission maintains that both the NZCC's SOI and 2degrees' Submission "*lean heavily on the concept of "parity" or "equivalence" of spectrum holdings to ensure that all parties can compete effectively*".[7] One NZ argues "*There is no basis for this concept, either in New Zealand or overseas precedent, or in fact and commercial reality. Seeking to achieve parity of spectrum holdings rather than allowing commercial realities to play out does not advance competitive outcomes it simply artificially manipulates the market*".[8]

5. This parity argument by One NZ is a classic "*straw man*" argument – it misrepresents the concerns that the NZCC and 2degrees have in fact put forward, and then seeks to argue why those concerns are incorrect.

6. Parity of spectrum holdings is not what either 2degrees or the NZCC have stated to be the appropriate test in this case when assessing whether the Proposed Acquisition would have the effect of substantially lessening competition in a market. At no point in either the 2degrees SOI Submission, its earlier submission on the NZCC's Statement of Preliminary Issues of 8 December 2023 (the **2degrees SOPI Submission**), or the NZCC's SOI itself, is parity of spectrum holdings held out to be the appropriate measure.

7. Rather 2degrees' and the NZCC's concern is that the **existing disparity** of spectrum holdings between 2degrees on the one hand and the market incumbents Spark / One NZ on the other hand would be further exacerbated by the Proposed Acquisition, and that this increase in disparity would have the effect of a substantial lessening of competition.[9] This is well articulated by the NZCC at [8] and [11] of the SOI as follows:

> "Significant **disparities** in spectrum holdings may influence the relative capacity of MNOs, which may affect competition between MNOs or influence competition in telecommunications markets. With the Proposed Acquisition, One NZ would significantly increase its total spectrum holdings, and increase the **disparity** in its holdings compared to those of 2degrees, whilst also reducing the disparity between

[5] For instance, contrary to [4.9-4.10] of the One NZ Submission.
[6] For instance, contrary to [31, 33-34 and figures 8-9] of the NERA Submission.
[7] Refer to One NZ, *"response to the Commerce Commission's Statement of Issues"* (5 March 2024), at [1.9].
[8] Ibid, [1.9 and 5.9].
[9] For instance, refer to the 2degrees SOPI Submission at [2.13(c), 2.14(b), 2.18, 4.5(b), 11.5, 11.7]

> One NZ and those of Spark New Zealand Limited (Spark). In a counterfactual where 2degrees acquired Dense Air's 2600MHz spectrum, there would be no spectrum **disparity** between One NZ and 2degrees, although a spectrum **disparity** between One NZ and 2degrees compared to Spark would remain." [at [8]; emphasis added]
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> "The main issues (theories of harm) we are continuing to test relate to the fact that, compared to a counterfactual where 2degrees acquired Dense Air's 2600MHz spectrum, the Proposed Acquisition would increase the **disparity** between One NZ's holdings and those of 2degrees and could accordingly change the relative capacities of the three MNOs." [at [11]; emphasis added]

8. One NZ argues strongly that a "*requirement for parity is not how telecommunications markets operate overseas and is out of line with all international precedent*", and makes reference to reports by the United Kingdom's Office of Communications (**Ofcom**) to bolster its position.[10] In support of One NZ, NERA also states that Ofcom's 2020 report "*Award of the 700 MHz and 3.6-3.8 GHz spectrum bands*", 13 March 2020, finds "*asymmetries in spectrum holdings do not necessarily have a negative impact on competition, and can in fact be beneficial to competition by promoting innovation*".[11]

9. However, the positions of both One NZ and NERA are undermined here by the very Ofcom reports that they have made reference to. The 2020 Ofcom report expressly discusses the "*risks to competition that can result from asymmetric spectrum holdings*".[12] Ofcom states:

9.1 "*We consider the UK mobile market is generally working well, with four credible MNOs and a range of MVNOs supporting strong retail competition. Nonetheless, we would be concerned if increased spectrum asymmetry weakened competition between MNOs, particularly if large asymmetries were to persist in the medium to long term*." [4.24]

9.2 "*Although it is absolute spectrum holdings that affect an MNO's capacity to supply its customers, we are also concerned about spectrum shares. A large difference in the relative holdings of spectrum could influence competition between the MNOs, both in terms of sub-groups or overall spectrum. Competition may be weaker either if one (or more) MNO has a very high share of spectrum, or one (or more) MNO has a very low share, though we do not consider that symmetrical shares of spectrum are necessary for competition to work well*." [4.26]

10. There is then an important passage in the Ofcom 2020 report, which 2degrees sets out in full below, given its relevance to the present case:

> "4.27 We consider that competition may be weaker if one (or more) MNO has a very high share of spectrum, for a number of reasons:

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[10] One NZ Submission at [5.12].
[11] NERA Submission at [17].
[12] Ofcom, *"Award of the 700 MHz and 3.6-3.8 GHz spectrum bands - Statement"* (13 March 2020) (https://www.ofcom.org.uk/__data/assets/pdf_file/0020/192413/statement-award-700mhz-3.6-3.8ghz-spectrum.pdf), at [4.24-4.30].

a) **Unmatchable competitive advantage**: If one MNO has such a high relative share of spectrum that it is able to offer superior services that its rivals are unable to replicate. Whilst this may benefit consumers in the short term, it could lead to weaker competition and therefore higher prices or lower quality services in the longer term.

b) **Spectrum hoarding**: An MNO with a very high spectrum share could in principle make limited use of any additional spectrum it wins in an auction, whilst other MNOs with less spectrum might have put it to more immediate or productive use, and therefore may have competed more strongly if they had won the spectrum instead. In addition, in certain circumstances an MNO might try to acquire or hold onto a block of spectrum to prevent specific arrangements of spectrum holdings within the band.

c) **Excess spectrum capacity distorting the market**: There is a risk that an MNO with a very high spectrum share could credibly threaten to respond with aggressive price cuts if rivals sought to grow their market share through lower prices. The threat of provoking such a response may put rivals off seeking to compete more aggressively, and lead to a softening of competition. If the MNO with spare capacity became the only viable alternative for prospective MVNOs (because others did not have sufficient capacity to supply them) this could soften wholesale competition, which in turn would have adverse effects on retail competition.

d) **Greater ability to launch new services without affecting existing services**: An MNO could use its spare spectrum to launch new services before its competitors, leaving its other services unaffected, whereas rivals might need to re-purpose some of their existing deployments, potentially to the detriment of their legacy services. Again, although some customers might benefit from earlier availability of new services, there could be weaker competition in the longer term.

4.28 We also consider that competition could be weaker if one (or more) MNO had a relatively small share of spectrum. An MNO in this situation might struggle to provide adequate capacity, and therefore not be able to supply its customers with a minimum level of service. Operators can add network capacity in a number of ways, in addition to deploying more spectrum. These can include building more sites and/or making use of more efficient technologies. Alternatively, operators can use traffic management techniques or commercial strategies that make best use of their capacity.

4.29 MNOs with lower shares of licensed spectrum than rivals may therefore be able to deliver comparable levels of capacity by relying on approaches other than by deploying additional spectrum. However, some of the alternative methods to increase capacity can take a long time to deploy, can be technically challenging or may cost more than acquiring and deploying additional spectrum. Spectrum availability may, therefore, place a key constraint on an MNO's capacity to supply services to its customers, especially when data traffic growth is so significant. As a result, an MNO with a low share of spectrum could have reduced incentives to compete aggressively for new customers given the costly investment in sites that would be required to serve additional customers (though we note that MNOs may in any case need to invest in sites to meet growing demand).

4.30 In general, therefore, spectrum holdings influence an MNO's ability to serve mobile users with a minimum quality of service and competition could be weaker if one or more MNOs had a relatively low share of overall spectrum."

11. Ofcom's position is not unique to 2020. Ofcom has raised similar concerns in relation to previous awards of spectrum in the United Kingdom. In 2017, Ofcom's primary concern in the auction process for certain spectrum bands

was that the auction may result in an increase to existing asymmetries. Ofcom stated:[13]

> "Our analysis suggested it was unlikely that any of the existing MNOs would be left with insufficient spectrum to remain credible suppliers after the Auction. However, we considered that a very asymmetric distribution of spectrum might allow an operator with a large amount of spectrum to offer a range or quality of services that could not be matched by credible competitors with smaller holdings. Conversely, we considered that an operator that was a credible competitor but had a small spectrum holding might struggle to compete in some segments of the market or in the provision of some services."

12. 2degrees considers that all of these points raised by Ofcom in both 2017 and 2020 are very relevant to consideration of the competition issues with the Proposed Acquisition. At the very least, they demonstrate that the concerns of the NZCC and 2degrees regarding the Proposed Acquisition having the effect of increasing the disparity between the spectrum holdings of 2degrees and One NZ are well founded and consistent with the similar concerns that Ofcom expressed in both 2017 and 2020. It is certainly not the case that such concerns about increased disparities are "*out of line with all international precedent*", as One NZ has maintained.[14]

WHY IT IS INCORRECT THAT 2DEGREES DETERMINED [Redacted] IN THE BIDDING PROCESS FOR DENSE AIR'S SPECTRUM, THEREBY INDICATING THAT 2DEGREES DID NOT SEE [Redacted]

13. The One NZ Submission argues that 2degrees had ample opportunity to acquire the Dense Air spectrum before One NZ was selected as the preferred bidder. It submits that, if it really needed the Dense Air spectrum, 2degrees [**Redacted**]. It says that the fact that 2degrees did not do so shows 2degrees did not see [**Redacted**].[15] Dense Air also maintains that 2degrees has "*had numerous opportunities to acquire DANZ's spectrum.* [**Redacted**] *This indicates to DA that 2degrees* [**Redacted**] *does not see it as necessary for its ability to compete in the relevant markets and is able to increase capacity through other means*".[16]

14. 2degrees strongly disagrees with this position.

15. As noted in section 6 of the 2degrees SOPI Submission, 2degrees participated fully in the Dense Air bidding process. [**Redacted**

[13] Ofcom, *"Award of the 2.3 and 3.4 GHz spectrum bands - Statement"* (11 July 2017) (https://www.ofcom.org.uk/__data/assets/pdf_file/0022/103819/Statement-Award-of-the-2.3-and-3.4-GHz-spectrum-bands-Competition-issues-and-auction-regulations.pdf), [4.11].

[14] One NZ Submission at [5.12].

[15] One NZ Submission at [1.4, 1.5 and 2.3].

[16] Dense Air Submission at p8. See also p11.

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16. 2degrees reiterates its understanding that [**Redacted**].[17] It is instructive on this point that Dense Air's external economists, the Brattle Group, state that "*a sign that accumulation of spectrum could lead to horizontally anticompetitive outcomes would be if the price that the MNO was willing to pay for the spectrum was unreasonably high, foreclosing a more competitive rival MNO*".[18] While the Brattle Group then seeks to argue there was no evidence that this was the case, 2degrees disagrees and considers that the Brattle Group's statement here is exactly on point.

17. In addition, 2degrees [**Redacted**

].[19]

18. [**Redacted**

[17] 2degrees SOPI Submission (8 December 2023), [**Redacted**].
[18] Refer to Brattle Group Submission at p37.
[19] 2degrees SOPI Submission (8 December 2024), [**Redacted**].

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19. [**Redacted**

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2degrees considers that this is clear evidence that it continues to be interested in acquiring the Dense Air spectrum, and that this remains the relevant counterfactual.

20. [**Redacted**

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HOW THE CONCERNS 2DEGREES HAS PREVIOUSLY RAISED WITH THE COMMISSION AROUND THREATS TO ITS BUSINESS FROM INSUFFICIENT SPECTRUM HAVE SUBSEQUENTLY MATERIALISED

21. One NZ has argued in its submission at [1.12] and [2.4] that 2degrees has on numerous occasions in the past complained that transactions of its

competitors would prevent it from competing in the market, but none of these concerns have come to fruition.

22. In response, 2degrees notes that it has successfully grown in the past, despite a relative disadvantage to Spark and One NZ in spectrum holdings. However, this does not mean that 2degrees can continue to do so in future. Primarily this is because the nature of mobile competition was previously determined more by coverage than by capacity. With the advent of higher data usage (and especially wireless broadband) this is no longer possible. Evidence for this can be found in [**Redacted**

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WHY IT IS NOT THE CASE THAT 2DEGREES HAS ALTERNATIVE MEANS OF EXPANDING ITS BROADBAND OFFERING WHICH ARE FEASIBLE

23. Both One NZ and NERA argue that there are multiple options available for 2degrees to expand its 4G FWA offering, independent of acquiring the Dense Air spectrum or indeed any further spectrum.[20] Dense Air also maintains that 2degrees "*has access to a range of alternatives to the acquisition of DANZ's spectrum for building capacity, including through the acquisition and/or use of alternative spectrum bands or through densification/building more cell sites*."[21]

24. In response, 2degrees reiterates its position in the 2degrees SOPI Submission that:[22]

24.1 It is not viable for 2degrees to build sufficient new towers to resolve its spectrum issues;

24.2 2degrees does not have available to it other comparable spectrum acquisition options. As expanded on below, 2degrees has [**Redacted**

], particularly if the NZCC grants clearance to the Proposed Acquisition; and

24.3 There are not competitively effective mitigation options that would be available to 2degrees.

25. For completeness, 2degrees has addressed below the alternatives suggested by One NZ and its economic advisors, discussing the reasons why each is not feasible and/or sufficient, and cross-referring to relevant paragraphs of the 2degrees SOPI Submission where its points have already been made.

[20] Refer to [7.18-7.29] of the One NZ submission, and [69] of the NERA Submission.
[21] Refer to Dense Air Submission at [6].
[22] Refer to [2.13-2.16] of the 2degrees SOPI Submission.

Upgrading Sites to 5G

26. One NZ maintains at [7.19] of the One NZ Submission that "*2degrees has a large amount of 3.5GHz spectrum (much more on a per-customer basis than Spark of One NZ) and is in the process of rolling out 5G. Accordingly, like One NZ, it can focus its 5G deployment on those areas where it believes [REDACTED]. This would allow it to offer more 4G FWA products if there was demand for these products*."

27. 2degrees does not agree that the position is as simple as One NZ maintains. [**Redacted**

] 2degrees notes that:

27.1 Upgrades take time. 3.5GHz spectrum requires additional antennae and is a more expensive upgrade;

27.2 Additional spectrum in the mid-band would enable 2degrees to increase capacity at lower cost and to utilise existing equipment.

27.3 One NZ already has ample spectrum for the purposes of 5G, and it does not need the 2600MHz spectrum to support its 5G roll out. When 5G does replace 4G as the predominant technology for FWA, any material increase in the mid-band spectrum that One NZ has can be re-used by it for 5G. This will leave 2degrees with an increased disparity in spectrum holdings.

MORAN Agreement

28. The One NZ Submission argues at [7.20-7.24] that a clear alternative for 2degrees is to continue to engage with One NZ in respect of its managed capacity services arrangement (**MORAN Agreement**) with One NZ. According to One NZ, [**Redacted**

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29. 2degrees disagrees with One NZ's framing of the opportunities it has under the MORAN Agreement. 2degrees does not offer wireless broadband today on the MORAN sites which are subject to the MORAN Agreement as 2degrees [**Redacted**

]. 2degrees would [**Redacted**

] to enable 2degrees to sell wireless broadband, but [**Redacted**

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30. 2degrees also notes that:

[23] One NZ Submission [7.21].

30.1 [**Redacted**

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30.2 2degrees' relatively low number of requests for upgrades to MORAN sites to date can also be attributed to 2degrees having [**Redacted**

]. Prior to getting the 5G spectrum, 2degrees' solution was [**Redacted**

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Deploying Existing Spectrum

31. The One NZ Submission and the NERA Submission both submit that 2degrees has not deployed its existing mid-band spectrum (1800 and 2100 MHz) at many of its towers, particularly in non-fibre areas.[24] The One NZ Submission argues that, if 2degrees were to do so, it would be able to improve its FWA capacity without needing to acquire additional spectrum.

32. 2degrees disagrees with the assertion that, simply by deploying its existing spectrum differently, it would be able to improve its FWA capacity in any meaningful way. [**Redacted**

] As 2degrees upgrades these sites to Ericsson equipment, it is deploying all spectrum bands. This was factored into the analysis in the 2degrees SOPI Submission when it showed sellable units available to it in the factual compared to a counterfactual where 2degrees acquires the Dense Air spectrum (eg at [8.4]).

Co-locating On More Sites

33. One NZ argues at [7.27-7.29] of the One NZ Submission that 2degrees could also colocate on more FortySouth or Connexa sites in non-fibre areas.

34. As an initial point, the redacted confidential wording in [7.27] of the One NZ Submission is factually incorrect. [**Redacted**

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[24] One NZ Submission [7.25]; NERA Submission, [69(a)].

35. In any event, 2degrees notes that the issues with colocating on sites are similar to those raised by building new sites [**Redacted**]. As such the same points 2degrees has previously made to the NZCC about network build apply. In addition, any new site (colocation or not) would benefit from 2degrees having greater spectrum holdings (as 2degrees would under the counterfactual).

Refarm 3G Spectrum

36. The NERA Submission also states that another alternative for 2degrees, at least in the short term, is to refarm the 2 x 5 MHz of 900 MHz spectrum and 2 x 5 MHz of 2100 MHz spectrum currently used for its 3G network when this is switched off.[25] According to NERA, this would be immediately available to use on 2degrees' 4G network and will represent around a 25% increase in its 4G capacity.[26]

37. 2degrees agrees with NERA that this spectrum will become available when it switches off its 3G network in late 2025, and could be used for both 4G and 5G FWA. After 3G shutdown, the spectrum will [**Redacted**

] Network capacity is the combination of 3G and 4G. If we remove 3G capacity and replace it with 4G, the capacity gain is only the efficiency increase of 4G over 3G. It is reasonable to assume 4G has double the efficiency of 3G, so real world capacity gain is likely to be only [**Redacted**]

38. In any event, the volume of spectrum available provides a relatively small amount of additional capacity (certainly not a 25% increase in 4G capacity as suggested by NERA), and is totally insufficient to address the spectrum disparities. As a result, this spectrum currently used for 3G cannot be considered an alternative to the Dense Air spectrum for the reasons previously set out at section 5 of 2degrees' SOPI Submission.

Deploy At More Towers

39. NERA maintains at [69(c)] of the NERA Submission that "*2degrees could consider selective rollout to additional tower sites*".

40. 2degrees has already set out at [2.13] and section 9 of its SOPI Submission why it is not viable for 2degrees to build sufficient further towers to resolve its spectrum issues. Those points remain applicable.

Acquire alternative spectrum

41. One NZ submits at [5.14] of the One NZ Submission that there is potential for 2degrees to acquire further 2100MHz, 2300MHz and 3.5GHz spectrum which has recently been, or is currently the subject of a sales process through Tu Atea, with a redacted reference to another alternative(s). NERA also argues at [69(d)] of the NERA Submission that "*There are significant quantities of*

[25] NERA Submission (5 March 2024), paragraph 69(b).
[26] Ibid.

spectrum in major mobile bands not currently held by the three largest operators", which 2degrees could attempt to buy.

42. 2degrees does not agree for the reasons set out at [2.14 and 11.4-11.11] of its SOPI Submission.

43. As regards spectrum available from Tu Atea, [**Redacted**]. 2degrees [**Redacted**] but lacks spectrum in the bands in and around 2600 MHz. Even if the NZCC considered [**Redacted**], only [**Redacted**]. This is [**Redacted**] the 2 x 35 MHz parcel of 2600 MHz spectrum subject to the Proposed Acquisition, and [**Redacted**]. This brings 2degrees back to its position in the 2degrees SOPI Submission at [11.5] that [**Redacted**], particularly if the NZCC grants clearance to the Proposed Acquisition.

44. As noted in the 2degrees SOPI Submission, the only other alternative spectrum acquisition opportunities are anticipated Crown awards of spectrum, and the renewals of spectrum rights by MBIE in 2028.[27] 2degrees reiterates its position that neither of these is a sufficient alternative to the Dense Air spectrum. The Crown awards of spectrum will not have a material impact on disparity in the spectrum bands used to provide 4G FWA. The volume of spectrum in Crown awards [**Redacted**] will not improve the disparity in spectrum holdings between 2degrees and Spark / One NZ (noting that disparity will increase under the Proposed Acquisition). In addition, rights renewals are typically expected to go to existing holders of the relevant rights, meaning 2degrees cannot rely on the 2028 renewals to reduce the spectrum disparities.

HOW 2DEGREES IS INTENDING TO USE THE DENSE AIR SPECTRUM TO ROLL OUT A NATIONAL 4G FWA OFFERING

45. The One NZ Submission relies heavily on the proposition that there is a real question as to whether 2degrees would in fact use the Dense Air spectrum to roll out a national 4G FWA network as it submits it would.[28] One NZ submits that 2degrees' existing equipment is not compatible with 2600 MHz spectrum, and it would not be efficient for 2degrees to roll out new equipment just to deploy a 4G FWA network.[29] One NZ considers that this makes no sense given the deployment costs and likely uneconomic return on such a narrow business case given uncertain uptake of 4G FWA customers, and in light of the impending transition to 5G (for which 2degrees has plenty of existing spectrum available to support), which has better speeds and a better customer experience.[30]

[27] 2degrees SOPI Submission (8 December 2023), [2.14].
[28] One NZ Submission (5 March 2024), [4.9].
[29] Ibid.
[30] Ibid.

46. The NERA Submission makes similar arguments, noting that it is unclear why 2degrees would invest in what NERA considers "*legacy technology*" to deploy the Dense Air spectrum for 4G FWA services.[31]

47. Dense Air also submits that it "*does not consider it credible that 2degrees would use DANZ's spectrum in the counterfactual to enable it to provide 4G FWA services, particularly given the time and cost involved in acquiring and deploying the equipment for 2degrees to use the spectrum*".[32]

48. In response, 2degrees notes that it requires additional capacity across much of its network and expects these capacity demands to continue to grow. 2degrees is planning to deploy 2600MHz on all sites across its network over time, and it will specifically target sites with limited capacity as it makes sense. 2degrees' internal business cases for acquiring 2600MHz spectrum assumed the cost of deployment across all sites.

49. 2degrees does not see a trade-off between rolling out one spectrum band at the expense of the other, and would seek to deploy both 2600MHz and 3500MHz at most locations. In fact, due to the greater coverage of 2600MHz, there may well be locations where 2600MHz would be deployed by 2degrees instead of 3500MHz (just as 2degrees understands One NZ is intending to do).

50. In addition, 2degrees' current 4G antennae are capable of transmitting 2600MHz spectrum, which means that any upgrade of sites to add 2600MHz only requires an additional radio to enhance capacity (and is unlikely to require additional RMA, site acquisition costs and/or structural requirements on the tower). Therefore this remains significantly cheaper than an upgrade to deploy additional capacity using 3500MHz spectrum, as this requires both new radios and new antennae from the site and potentially costly structural work and site acquisition to the infrastructure.

51. As a result, 2degrees does not agree that the required cost per site involved in acquiring and deploying the relevant equipment for 2degrees to use the 2600 spectrum will be high as maintained by the parties. Based on 2degrees' calculations, there is likely to be [**Redacted**

] This is a relatively small cost per site.

52. Given One NZ also has the same holdings of 3.5GHz as 2degrees, and sees the need for additional 2600MHz spectrum, it should follow that 2degrees would also see a need given it has no existing holdings of 2600MHz spectrum today.

53. Therefore, 2degrees' planned investments are not in "*legacy technology*" as submitted by NERA.

[31] NERA Submission (5 March 2024), [63].
[32] Dense Air Submission at p10.

WHY 2DEGREES IS NOT "OVERWEIGHT" ON SPECTRUM RELATIVE TO THE SIZE OF ITS MARKET SHARE, WHEREAS ONE NZ IS "UNDERWEIGHT"

54. One NZ submits at 7.8 of the One NZ Submission that "*2degrees clearly has more than sufficient spectrum allocation to compete hard in non-fibre areas, but appears to have made a business decision not to do so*". Similarly, the NERA Submission disagrees with 2degrees' position that [**Redacted**]. NERA submits that 2degrees has sufficient spectrum holdings to service its existing customers, and is in fact "*overweight*" in its spectrum holdings, as its share of spectrum outweighs its market share.[33] According to NERA, 2degrees also has a greater share of spectrum per subscriber than either of Spark and One NZ, meaning it is better placed to expand.[34] In contrast, One NZ is "*underweight*", and the Proposed Acquisition will allow it to better compete in the relevant markets, particularly against Spark.

55. Dense Air also argues that "*the acquisition of the spectrum by 2degrees would give 2degrees substantially more spectrum than it needs relative to its customer numbers*".[35] It maintains that 2degrees is "*not capacity constrained*"[36], and states "*it is important that the Commission focusses on the spectrum holdings relative to existing customer numbers rather than simply the aggregate spectrum holdings by each MNO in figures 1, 2 and 3 in the SoI*".[37] The Brattle Group makes similar points (for instance at pp39 and 42 of the Brattle Group Submission).

56. As an initial point, 2degrees notes that this argument ignores 2degrees' current scale relative to the much larger One NZ and Spark, and the fact that 2degrees needs to expand its business in future to grow its customer base. Accordingly, any measure of spectrum relative to existing market share simply seeks to preserve the status quo which favours the incumbents rather than to allow for further growth by a challenger brand like 2degrees.

57. Since 2019, 2degrees' capacity needs have increased significantly in line with our customers' data demands with total growth over 5 years of [**Redacted**] in the last 12 months.

58. In addition, 2degrees notes that there are inherent limitations with adopting a customer:spectrum ratio as a measure for determining whether an operator has sufficient spectrum. Among other things, this:

58.1 does not consider the types of users or services – an FWA user consumes [**Redacted**] than a non-FWA user in the mobile busy hour;

[33] NERA Submission (5 March 2024), [31].
[34] Ibid, [34].
[35] Dense Air Submission at [5(b)].
[36] Ibid at [6].
[37] Refer to Dense Air Submission at p7.

58.2 does not consider the distribution of users - users in good coverage areas consume less network capacity resources than those in poor coverage;

58.3 does not consider the current growth rate or the ability to grow customers; and

58.4 does not consider the types of technology deployed.

59. In any event, 2degrees reiterates its position in the 2degrees SOPI Submission at [2.4-2.7 and 2.10-2.11] that its network is [**Redacted**]. Direct evidence in support of 2degrees' position here that [**Redacted**] can be found in the facts that:

59.1 [**Redacted**][38];

59.2 [**Redacted**][39]; and

59.3 [**Redacted**][40]

60. In particular, 2degrees stresses that [**Redacted**][41] Even as 2degrees upgrades the network (and adds all spectrum bands to each site), and factoring in the [**Redacted**], 2degrees would still have approximately [**Redacted**]

61. This is strong evidence that 2degrees is not "*overweight*" in terms of its spectrum holdings.

MISCELLANEOUS

62. As requested by the Commission at [14] of the SOI, 2degrees has provided separate public and confidential versions of this cross-submission. The information shaded in blue and contained in square brackets in the confidential version has been redacted on confidentiality grounds from the public version.

[38] Refer to [**Redacted**] of 2degrees' SOPI Submission.
[39] Refer to [**Redacted**] of 2degrees' SOPI Submission.
[40] Refer to [**Redacted**] of 2degrees' SOPI Submission.
[41] Refer to [**Redacted**] of 2degrees' SOPI Submission.