

Review of Services in Schedule 1 of the Telecommunications Act 2001

Final decision on whether to commence an investigation under clause 1(3) of Schedule 3 of the Telecommunications Act 2001

Decision No. [2021] NZCC 5

The Commission: Tristan Gilbertson
Dr John Small
Elisabeth Welson
John Crawford

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Associated documents

Publication date	Reference	Title
10 March 2021	ISBN 978-1-869458-73-7	Review of Services in Schedule 1 of the Telecommunications Act 2001: Draft decision on whether to commence an investigation under clause 1 of Schedule 3 of the Telecommunications Act 2001
5 July 2016	ISSN 1178-2560	Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001

Glossary

Act	Telecommunications Act 2001.
CPP	Calling party pays.
Designated service	A service described in Part 2 of Schedule 1, which includes both price and non-price terms for access.
IP	Internet protocol.
LTE	Long-term evolution is a 4th generation mobile technology. Relative to 3rd generation mobile, the LTE specification enables 100 Mbps+ data transmission rates, increased system capacity and shorter transmission latency times.
MBIE	Ministry of Business, Innovation and Employment.
MNO	Mobile Network Operator.
MVNO	Mobile Virtual Network Operator.
PSTN	Public Switched Telephone Network, defined in clause 5 of the Act as “a dial-up telephone network used, or intended for use, in whole or in part, by the public for the purposes of providing telecommunication between telephone devices.”
RBI	Rural Broadband Initiative - the name given to the Government’s initiative to roll-out a higher-speed broadband access network to rural households. Contains several phases known as RBI1 and RBI2.
RCG	Rural Connectivity Group.
relevant services	The three services that are each subject to review in this paper are: <ol style="list-style-type: none"> 1) Fixed PSTN interconnection service; 2) Number portability services; and 3) Mobile co-location service.
RPP	Receiving party pays.
RSP	Retail service providers.
Spark	Spark New Zealand Limited.
Specified service	A service described in Part 3 of Schedule 1, which excludes the price payable for access to a specified service.
STD	Standard terms determinations are the Commerce Commission’s primary mechanism for regulating telecommunications services under the Act.
TCF	New Zealand Telecommunications Forum.
UFB	Ultra-Fast Broadband – the name given to the Government’s initiative to roll-out a fibre-to-the-home access network to give households access to high-speed broadband.
WISP	Wireless Internet Service Provider.

Executive Summary

- X1. The Commerce Commission (Commission) is required to consider whether there are reasonable grounds for commencing an investigation into whether to omit number portability, fixed public switched telephone network (PSTN) interconnection, or mobile co-location (relevant services) from the list of designated or specified services in Schedule 1 of the Telecommunications Act 2001 (Act) by 30 June 2021.
- X2. Our final decision is to maintain our draft decision that there are not reasonable grounds for commencing an investigation into whether any of the relevant services should be omitted from Schedule 1 of the Act at this time. In coming to our final decision, we have had regard to the submissions we received, which generally supported our draft decision. Our reasons are as follows:
- X2.1 Fixed PSTN interconnection: the ability to interconnect with fixed PSTN services remains important in many parts of the country, and commercial arrangements for fixed PSTN interconnection are broadly based on the terms set in the Commission's original determination for this service.
 - X2.2 Number portability: number portability continues to play an important role in reducing barriers to customer switching and promoting competition in retail markets.
 - X2.3 Mobile co-location: the ability to co-locate equipment on the infrastructure of another mobile network operator continues to facilitate competition between mobile operators, particularly in more remote areas.
- X3. Our next review of whether there are reasonable grounds to commence an investigation into whether to omit any of the relevant services from Schedule 1 must be completed in no later than five years' time, on 12 May 2026. We note we can initiate an investigation under clause 1(1) of Schedule 3 into whether a specified or designated service should be added, omitted or amended at any time within the next five years.
- X4. This document responds to submissions on our draft and summarises the reasons for our final decision.

Chapter 1: Introduction

Purpose

1. This review provides our final decision on whether there are reasonable grounds for commencing an investigation into whether any of the relevant services should be omitted from Schedule 1 of the Act. The relevant services are:
 - 1.1 Interconnection with a fixed public switched telephone network (PSTN) (origination and termination of calls);
 - 1.2 Local telephone number and cellular telephone number portability services;¹ and
 - 1.3 Co-location on cellular mobile transmission sites.

Structure of this review

2. Following this introduction, in which we provide some background and context for this review and outline the process we have undertaken, the remainder of this review has the following structure:
 - 2.1 **Chapter 2: Our legislative framework** discusses the relevant legal framework for this review.
 - 2.2 **Chapter 3: Our final decision** outlines a summary of our final decision for each service, addresses submissions we received on our final decision and provides reasons for our final decisions that there are not reasonable grounds for commencing an investigation into whether each relevant service should be omitted from Schedule 1 of the Act.

Background and context for this review

What is a Schedule 1 service?

3. To deliver competitive retail telecommunications services, retail service providers (RSPs) may require access to wholesale services. A number of wholesale services are subject to limited or no competition. In such cases, access to these services may be mandated under the Act to promote competition for the long-term benefit of end-users.
4. Schedule 1 of the Act contains the regulated wholesale services, which are designated access services and designated multinetwork services (known together as designated services), and specified services. For designated services, we are able to determine price and non-price terms of access, but we are limited to determining only non-price terms of access for specified services.

¹ We note that Subpart 2 of Part 2 of Schedule 1 of the Act contains two services relating to number portability – the local telephone number portability service and the cellular telephone number portability service. We consider both services together for the purposes of this review.

5. Schedule 1 describes each regulated service and the general conditions of access, and so can form the basis for access seekers and access providers to negotiate agreement.
6. Schedule 1 currently contains 11 regulated services, including nine designated services (seven designated access services and two designated multinetwork services) and two specified services.
7. Once a service is in Schedule 1, regulated terms of access can be given effect through a determination or a standard terms determination (STD). However, this review is only concerned with whether services should remain in Schedule 1 to promote competition for the long-term benefit of end-users; not with the status or terms of any determination or STD.

Why we have conducted this Schedule 3 review of Schedule 1 services

8. As markets evolve at both the retail and wholesale level, wholesale service providers can face increased competition. These market developments can indicate that it may no longer be necessary to mandate access to a Schedule 1 service.
9. To ensure that the scope of regulated access in Schedule 1 of the Act remains appropriate, the Commission is required to periodically consider whether regulation is still justified. Specifically, clause 1(3) of Schedule 3 requires that at least every five years the Commission considers whether there are reasonable grounds for commencing an investigation into whether any Schedule 1 services should be omitted from the Act. These reviews are concerned with whether regulation may no longer be needed to promote competition for the long-term benefit of end-users in terms of the purpose statement in section 18 of the Act.
10. Therefore, the question we are considering for this review is whether there are reasonable grounds for commencing an investigation into whether any of the three relevant services should be omitted from Schedule 1 of the Act, in accordance with section 18 of the Act.^{2,3}

Timing and scope of this review

11. As discussed at paragraph 9, we are required to review each Schedule 1 service at least every five years, starting from the time the service came into force.⁴ The relevant services were last reviewed in June 2016, meaning the current review must be completed by June 2021.

² We note that previous five-yearly reviews have included unbundled copper services listed in Schedule 1. These services have been exempted from this review in accordance with clause 1(8) of Schedule 3 of the Act. This exemption was inserted in 2018 as unbundled services must be separately reviewed before 2025 as part of the copper review under section 69AH of the Act.

³ The other Schedule 1 services that are not part of the current review are the national roaming service and the mobile termination access service (MTAS), as these were reviewed in 2018 and 2020 respectively.

⁴ Where a service has been amended or altered, the effective date for that service is the date the amended or altered service came into effect.

12. This review is limited to considering whether there are reasonable grounds for commencing an investigation into whether any of the relevant services should be omitted from Schedule 1 of the Act. It does not extend to considering the introduction of a new service, or amendment of an existing regulated service. This review is also not concerned with the status of any determination or STD.⁵
13. The telecommunications industry is characterised by a high rate of technological change, where services and competitive constraints can develop quickly. Clause 1(1) of Schedule 3 of the Act empowers us to commence an investigation on our own initiative into whether any Schedule 1 service should be added, omitted or amended, provided we are satisfied there are reasonable grounds for such an investigation. We are therefore able to revisit the scope of regulation before the conclusion of the next five-year interval to reflect commercial or technological developments, where reasonable grounds exist.

Our process

14. Table 1 below sets out the process we have undertaken.

Table 1: Our process

Milestone	Indicative date
Draft decision published	10 March 2021
Submissions on draft decision due	24 March 2021
Cross-submissions on draft decision due	6 April 2021
Final decision published	12 May 2021

⁵ Any review of the actual determinations or STDs would be subject to a different process (such as that specified in section 30R of the Act, in the case of STDs).

Chapter 2: Our legislative framework

15. In establishing the legislative framework for this review under clause 1(3) of Schedule 3 of the Act, we considered the application of section 18 of the Act.

Section 18

16. In reaching our view on whether there are reasonable grounds for commencing an investigation, we must make the decision that will give, or is likely to best give, effect to the purpose set out in section 18(1) of the Act:

... to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.

17. Section 18(2) and (2A) identify particular matters that we are required to consider when determining what promotes competition in telecommunications markets for the long-term benefit of end-users:

(2) In determining whether or not, or the extent to which, any act or omission will result, or will be likely to result, in competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand, the efficiencies that will result, or will be likely to result, from that act or omission must be considered.

(2A) To avoid doubt, in determining whether or not, or the extent to which, competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand is promoted, consideration must be given to the incentives to innovate that exist for, and the risks faced by, investors in new telecommunications services that involve significant capital investment and that offer capabilities not available from established services.

18. The High Court has observed that subsection (1) is the “dominant” provision in section 18, and subsections (2) and (2A) “are specified for the purpose of assisting analysis under section 18(1)”.⁶ In this sense, subsections (2) and (2A) are not isolated considerations on their own. Rather, they form part of the consideration of whether competition is promoted for the long-term benefit of end-users.
19. Put simply, we are required to make a decision that promotes competition for the long-term benefit of end-users, and as part of our assessment we must consider the impact of our decisions on efficiencies as well as investment in capital-intensive new telecommunications services.

⁶ *Chorus Ltd v Commerce Commission* [2014] NZHC 690 at [34].

What are considered reasonable grounds for commencing an investigation?

20. We have developed a framework for assessing whether there are reasonable grounds for commencing an investigation in our previous Schedule 3 reviews of Schedule 1 of the Act.⁷
21. We consider that reasonable grounds for commencing an investigation into whether any of the relevant services should be omitted from Schedule 1 of the Act are likely to exist where the evidence before us suggests that circumstances have changed since each relevant service was added to Schedule 1 in such a way that:
 - 21.1 continued regulation may no longer be necessary to promote competition; or
 - 21.2 existing regulation may be having a negative impact and removing the regulation may best promote competition for the long-term benefit of end-users.
22. When considering whether there may be reasonable grounds for commencing an investigation, we first consider competitive developments at the retail level, as this is where services are supplied to end-users using the relevant services as an input. We consider competitive constraints that operate at the retail level to assess the extent to which competition in the retail market relies on access to the relevant services or on alternative wholesale services. Ultimately, this consideration informs our decision about whether omitting any of the relevant services would best promote the purpose in section 18 of the Act.
23. We then consider each of the relevant services. In each case, we are interested in examining the competitive constraints that might exist, including:
 - 23.1 The existence of any direct substitutes for the relevant service. For example, where access seekers are using the relevant service, we will consider whether there are wholesale alternatives they can switch to if the price of the service increased. If so, we will consider the extent that access seekers have actually switched or threatening to switch between wholesale services;
 - 23.2 The extent to which any direct substitutes have acted as a genuine competitive constraint on a relevant service. If direct substitutes are supplied by the same access provider, these are unlikely to represent a sufficient constraint on the relevant service (unless the direct substitute is also regulated); and
 - 23.3 Whether there are any constraints that have operated indirectly through the retail level (from which demand for the wholesale service was derived). For example, an increase in the price of the relevant service may be passed through to the retail price of the service supplied to end-users using the regulated input. If such an increase in the retail price were to induce end-users to switch to other retail services that do not rely on the regulated input,

⁷ This framework was developed in our review of Schedule 1 services in 2016 and our review of MTAS in 2020.

such switching of demand away from the regulated input may indirectly constrain the access provider.

24. We also take current market conditions and developments into account in assessing whether there are reasonable grounds for commencing an investigation.
25. There may also be geographic differences in the extent to which a Schedule 1 service faces competition. For example, a Schedule 1 service may be supplied in some regions where competition is limited and others where there is significant competition. If a service faces no or limited effective competition in some regions, then it is likely to be appropriate to retain the service in Schedule 1.

Chapter 3: Our final decision

26. This chapter outlines the reasoning for our final decision for each service.
27. We first provide a summary of our draft decision and the submissions we received on our draft. We then set out our final decision that there are not reasonable grounds for commencing an investigation into whether each relevant service should be omitted from Schedule 1 of the Act.

Summary of our draft decision

28. Our draft decision was that there were not reasonable grounds for commencing an investigation into whether to omit any of the relevant services from Schedule 1 at this time.

Fixed PSTN interconnection.

29. Our draft decision was that the fixed PSTN interconnection service should remain in Schedule 1 of the Act.
30. Our view was that the supply of termination services is unlikely to be constrained in the absence of regulation, because:
 - 30.1 call termination is an essential input into many retail calls involving fixed PSTN end-users. The ability to interconnect with fixed PSTN services remains important in many parts of the country; and
 - 30.2 an increase in the fixed termination rate is unlikely to result in called customers switching away from the terminating operator under the 'calling party pays' principle.
31. We further noted that in the absence of an STD or any bilateral determination, interconnection tariffs and conditions are established on a commercial basis. However, given the call termination bottleneck where the calling party pays for the call, we consider that the interconnection service should remain in Schedule 1 as a backstop, in the event that commercial negotiations fail. We noted that the commercial arrangements for fixed PSTN interconnection have been broadly based on the terms set in the Commission's original fixed PSTN determination in 2002.⁸

Number portability services

32. Our draft decision was that the local and cellular telephone number portability services should remain in Schedule 1 of the Act. We considered that an easy switching process is essential to reducing barriers to customer switching and in turn promoting competition in retail markets.

⁸ See <https://comcom.govt.nz/news-and-media/media-releases/archive/telecommunications-actcommerce-commission-settles-interconnection-price>.

Co-location on cellular mobile transmission sites

33. Our draft decision was that co-location on cellular mobile transmission sites should remain in Schedule 1 of the Act.
34. Our view was that mobile co-location promotes competition in the downstream retail market for mobile services by enabling operators to extend their coverage by leasing space on existing infrastructure owned by other mobile operators.
35. We further noted that the ability to co-locate equipment on the infrastructure of another mobile network operator facilitates the efficient deployment of mobile technology and services through the sharing of the costs of facilities, such as towers and masts. This facility is particularly important for reaching more remote areas and when quickly deploying new technologies, such as 4G LTE and 5G in the near future.

Overview of submissions

36. We published our draft decision on 10 March 2021 and invited interested parties to submit on the draft by 24 March 2021. We received four submissions on our draft decision. These were from 2degrees, New Zealand Telecommunications Forum (TCF), Nova Energy Limited, and Spark NZ. We did not receive any cross-submissions. All submissions are available on our website.⁹
37. All submissions supported our draft decision that there are not reasonable grounds for commencing an investigation into whether any of the relevant services should be omitted from Schedule 1 at this time.
38. 2degrees submitted that it supports our draft decision that there are not reasonable grounds for commencing investigations to omit any of the relevant services from the Act at this time.¹⁰
39. The submission from the TCF only commented on the TCF position for the number portability services and supported our draft decision and reasoning.¹¹
40. Nova Energy submitted “[w]e support the Commission’s draft decision that there are not reasonable grounds for commencing an investigation into whether any of the Schedule 1 Services should be omitted from Schedule 1 of the Act at this time.”¹²
41. Spark submitted that it was unclear why the services that are the subject of this review should continue to be regulated, “as operators, in practice, have incentives

⁹ See <https://comcom.govt.nz/regulated-industries/telecommunications/projects/schedule-3-review-of-schedule-1-services-number-portability,-mobile-co-location,-interconnection-with-fixed-pstn-review>.

¹⁰ 2degrees “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at page 1.

¹¹ TCF “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 3.

¹² Nova “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4.

that likely make a regulatory backstop redundant.”¹³ However, Spark concluded that “[w]e agree that considering whether to omit these services from the Act is not a priority at this stage.”¹⁴

Out of scope issues raised in submissions

42. As outlined earlier, the scope of the current review is whether there are reasonable grounds for commencing an investigation into whether any of the relevant services should be omitted from Schedule 1 of the Act.
43. Two of the submissions on our draft decision commented on matters that are out of scope of this review. We briefly address these matters below.
44. Nova submitted that the mobile co-location service “does not assist the ability of MVNOs to access the mobile market on fair and reasonable wholesale prices and terms... (as set out in our submission dated 28 June 2019 on the Commission’s mobile market study)”.¹⁵
45. We note that concerns about MVNO access to the mobile market were considered in detail as part of our 2019 mobile market study. We concluded that we did not consider MVNO access regulation to be appropriate at the time as there needs to be greater evidence of market failure in respect of outcomes delivered to mobile consumers to justify wholesale access regulation.¹⁶ Nova has not provided any further evidence to suggest that this topic warrants further investigation at this time.
46. Spark submitted that “the Commission [should consider] developing deregulation guidelines – along the lines of the recently finalised non-discrimination and equivalence guidelines – to promote certainty for parties. The rolling back of regulation wherever possible – to minimise regulatory scope and promote competition – is a key component of the Part 2 and 6 regulatory framework.”¹⁷
47. We agree with Spark that deregulation guidelines may be helpful to promote certainty for stakeholders about how we will approach future deregulation reviews under Part 2 of the Act. This has been added to our longer-term Telecommunications work programme for consideration and prioritisation against other focus areas. Our approach to deregulation under Part 6 of the Act will be considered separately after the price-quality regime has been implemented.

¹³ Spark “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4.

¹⁴ Spark “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 2.

¹⁵ Nova “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4 (d).

¹⁶ Commerce Commission “Mobile market study: Findings report” (26 September 2019) at page 12.

¹⁷ Spark “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 2.

Our final decision

Interconnection with a fixed PSTN, including origination and termination of calls

48. Our final decision is that there are not reasonable grounds for commencing an investigation into whether the fixed PSTN interconnection service should be omitted from Schedule 1 of the Act. Our reasons for this final decision are explained below.

Description of the fixed PSTN interconnection service and regulatory background

49. Schedule 1 of the Act refers to origination and termination of voice and data calls on a fixed PSTN. This covers calls originating on any network and terminating on a fixed PSTN number (eg 04 xxx xxxx), or calls originating on a fixed PSTN number and terminating on a special number (eg 0800 xxx xxx). Origination is also an input used by toll bypass operators in order to provide toll services to their customers.
50. Two designated fixed PSTN interconnection services were included in Schedule 1 of the Act in 2001, covering interconnection with Telecom’s fixed PSTN and interconnection with other fixed PSTNs. Schedule 1 of the Act was amended in 2011 to create a single designated fixed PSTN interconnection service.¹⁸ This single service covers any origination and termination of voice and data calls on a fixed PSTN and is not limited to just the legacy Telecom copper-based PSTN.
51. In our Schedule 3 review of this service in 2016, we concluded that the fixed PSTN interconnection service should remain in Schedule 1 of the Act. This was on the basis that there were no direct substitutes for the fixed PSTN interconnection service, and that any indirect constraints at the retail level were likely to be limited (as the interconnection rate represented a small proportion of retail calling prices).
52. Our understanding from previous reviews is that since this service was redefined in 2011, interconnection arrangements have been agreed on a commercial basis. We understand that the commercial interconnection arrangements are broadly anchored by the Commission’s original bilateral interconnection determination that expired in 2003.¹⁹

How the fixed PSTN interconnection service promotes competition

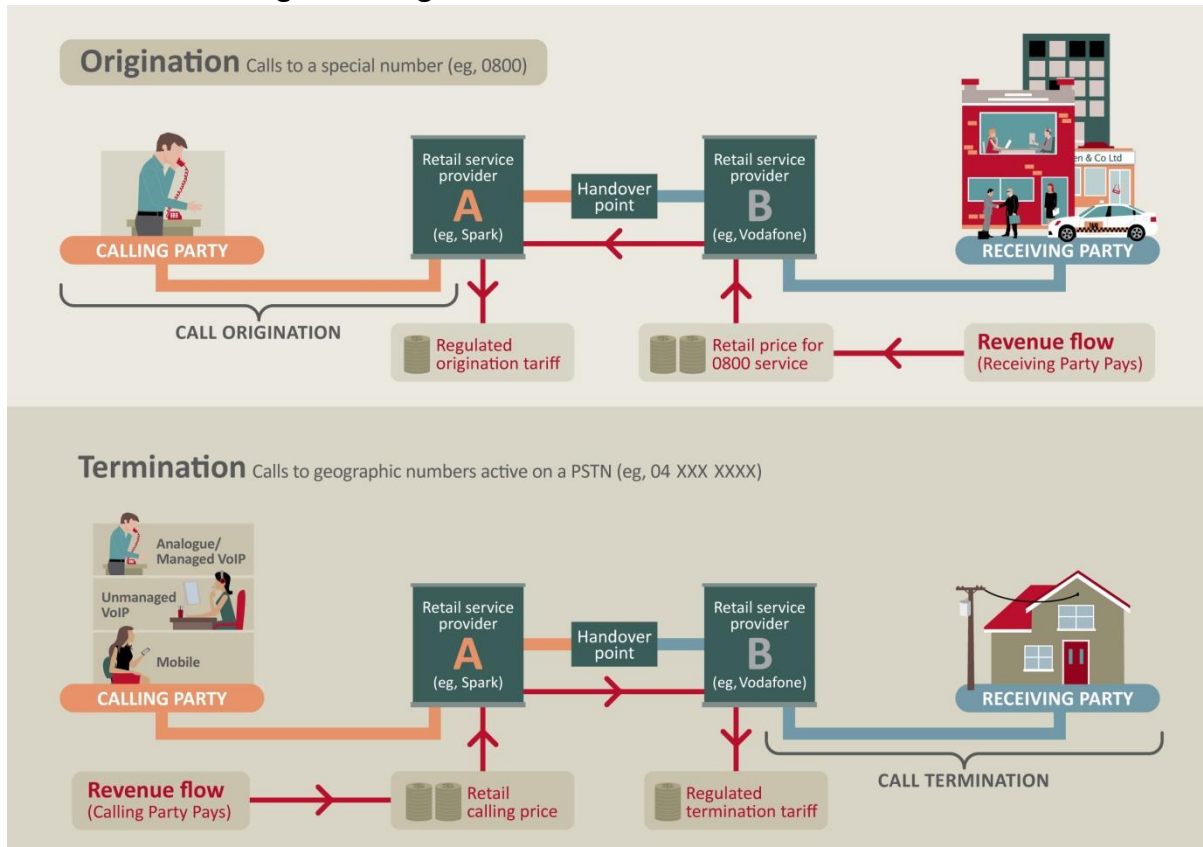
53. Fixed PSTN interconnection allows for the completion of voice and data calls between customers on different networks (often referred to as ‘off-net’ calls).²⁰ The origination and termination of off-net calls involving a fixed PSTN, and the associated revenue flows, are illustrated in Figure 1.

¹⁸ Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011, Schedule 3.

¹⁹ Vodafone “Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001: Submission on draft decision” (23 May 2016), page 2.

²⁰ For a call between subscribers on the same network (sometimes referred to as an ‘on-net’ call), call origination and call termination are ‘self-supplied’ by the network operator. For such calls, the network operator incurs the costs of originating and terminating the call and recovers those costs from its own customers who make or receive the call.

Figure 1: Origination and termination on a fixed PSTN



54. Call origination is a wholesale service whereby an originating operator does not charge the calling party for starting the call. The provision of this service exists in the following situations:
- 54.1 **Calls to special numbers such as 0800 numbers:** The receiving party pays the terminating operator for the call, which then compensates the originating operator for the cost of starting the call by paying the wholesale origination tariff. This model of payment is often referred to as receiving party pays (RPP), which means the receiving party pays for the origination and termination of the call; and
 - 54.2 **Toll bypass:** This is where the call is originated in one telecommunications provider's fixed network using the access code of another telecommunications provider, who has a commercial relationship with the end-user for the call being made. The telecommunications provider who has the commercial relationship with the customer compensates the originating operator for the cost of starting the call by paying the wholesale origination tariff.
55. Call termination is a wholesale service that consists of terminating a call that was originated on another network. The terminating operator receives the call at the handover point closest to the receiving party and delivers it to the geographic

number dialled (eg. 04 xxx xxxx).²¹ The terminating operator does not charge the receiving party for the service. Instead it charges the originating operator a wholesale termination tariff. This model of payment is often referred to as calling party pays (CPP), which means the calling party pays for the origination and termination of the call.

56. As we noted in our 2016 review, where the calling party pays for calls, the network that terminates or completes the call is likely to be able to increase the wholesale rate for terminating the call without risk of losing its subscribers. This is because the increase in the termination rate would be recovered through the retail prices paid by the calling party. The receiving party does not face the higher termination rate and would have no incentive to respond directly by switching to another network.²²
57. Interconnection is an essential input to complete calls between different networks. For a network operator to be able to deliver any-to-any connectivity to its customers, that operator must be able to interconnect with other networks. In the absence of interconnection, a network operator would only be able to offer calls between its own subscribers and would not be able to terminate its customers' calls on other networks or receive calls from other networks. In the absence of interconnection on reasonable terms, smaller networks (with fewer on-net customers) may be constrained from competing with larger networks in the supply of voice services that involve a fixed-line customer.
58. The goal of regulated interconnection is to prevent discrimination between RSPs, thereby facilitating competition and reducing entry barriers, as well as ensuring that retail prices are not raised by excessive wholesale interconnection tariffs.

Developments since our 2016 review

59. Since our 2016 review, there have been a number of developments, which are relevant to the fixed PSTN interconnection service. These include the increasing migration of retail customers to Internet Protocol (IP)-based voice services, and Spark's announced intention to decommission its legacy PSTN. These are discussed below.
60. Since our last review, the uptake of services on the Ultra-Fast Broadband (UFB) networks has increased strongly, from 241,000 connections in June 2016 to 1,080,000 connections in December 2020.²³ The uptake of wireless broadband services has also increased, from 27,000 services in June 2016 to 221,000 services in

²¹ In the case where the telecommunication provider who initiates the call chooses to hand the call over at a point that is not the closest to the location of the receiving party then, in addition to the termination service, the terminating provider also provides the transit service which is charged for on a commercial basis.

²² Commerce Commission "Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001" (30 June 2016), paragraph 89.1.

²³ MBIE "Quarterly updates on broadband deployment", available online at: <https://www.mbie.govt.nz/science-and-technology/it-communications-and-broadband/fast-broadband/quarterly-updates-on-broadband-deployment/>.

June 2020.²⁴ In addition, the volume of mobile voice minutes surpassed the volume of fixed voice minutes in 2016, and has since continued to increase.²⁵

61. These trends indicate that customers are increasingly using a variety of ways to make voice calls, in addition to the traditional copper-based PSTN. This was reflected in Spark's announcement in April 2017 that it was commencing the gradual decommissioning of its legacy PSTN and replacing it with a new IP-based network.²⁶
62. Spark has noted that the number of customers connected to its fixed PSTN had fallen from over 1 million customers in 2017 to around 400,000 customers in 2020.²⁷ However, Spark has also noted that while many customers had switched their voice services to fibre or wireless (or rely solely on mobile), "in many areas of New Zealand our landline voice calling is still running on the legacy public switched telephone network (PSTN)".²⁸
63. The bottleneck nature of interconnection and its importance as an input into the supply of off-net calls (as discussed at paragraphs 56 and 57 above) indicates that regulation may continue to be necessary to promote competition.
64. We also understand that although there is no current bilateral or standard terms determination in place for fixed PSTN interconnection, commercial interconnection agreements are broadly based on the terms set by the Commission for fixed PSTN origination and termination in the original interconnection determination.²⁹ In this regard, our view is that the availability of the fixed PSTN interconnection service in Schedule 1 is likely to provide an important backstop and reference point for commercial negotiations, and is unlikely to impose costs on the sector.
65. We note that we can monitor and review fixed PSTN interconnection arrangements in the future and that such monitoring would be consistent with our functions under section 9A of the Act.

Submissions on fixed PSTN interconnection

66. 2degrees submitted "we agree the ability to interconnect with fixed PSTN services remains important in many parts of the country, and commercial arrangements for fixed PSTN interconnection are broadly based on the terms set in the Commission's original determination for this service."³⁰

²⁴ Commerce Commission "Annual Telecommunications Monitoring Report 2020" (16 March 2021), page 4.

²⁵ Commerce Commission "Annual Telecommunications Monitoring Report 2016" (21 June 2017), Figure 5, and "Annual Telecommunications Monitoring Report 2020" (16 March 2021), page 4.

²⁶ "Spark NZ outlines upgrade of New Zealand's voice communications", Spark media release (19 April 2017).

²⁷ Spark "Spark announces next phase of landline voice calling upgrade", at: https://www.sparknz.co.nz/news/Spark_announces_next_phase_landline_voice_calling_upgrade/

²⁸ Spark Annual Report 2020, page 33.

²⁹ See for example Vodafone "Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001: Submission on draft decision" (23 May 2016), page 2.

³⁰ 2degrees "Submission on draft decision on Schedule 3 review of Schedule 1 services" (24 March 2021) at page 1.

67. Nova submitted “[t]he ability to interconnect with fixed PSTN services remains important in many parts of the country, and there is currently no clear direct substitute for the PSTN interconnection service in respect of traditional copper-based landline voice calling. The availability of the fixed PSTN interconnection service in Schedule 1 is likely to continue to provide an important backstop and reference point for commercial negotiations for the provision of the service (and this is unlikely to impose costs on the sector).”³¹
68. Spark questioned whether discrimination would be possible in the absence of regulation, as operators could re-route traffic through other carriers.³²

Our final decision on fixed PSTN interconnection

69. 2degrees and Nova both agreed with our draft decision.
70. With respect to Spark’s submission, we note that although re-routing of traffic might reduce the effectiveness of any discrimination, it would not address the concerns about the potential for excessive wholesale interconnection tariffs and competitive distortions. These concerns arise in the case of call termination under CPP and network effects (as discussed at paragraphs 55 to 57 above).
71. For the reasons given above, our final decision confirms our draft decision that there are not reasonable grounds for commencing an investigation into whether the fixed PSTN interconnection service should be omitted from Schedule 1 of the Act.

Number portability

72. Our final decision is that there are not reasonable grounds for commencing an investigation into whether the local and cellular telephone number portability services should be omitted from Schedule 1 of the Act. Our reasons for this final decision are explained below.

Description of the number portability services and regulatory background

73. There are two number portability services described in Schedule 1 of the Act:
- 73.1 the local telephone number portability service – a service that enables the end-user of a fixed telephone network service to change providers of that service but to retain the same telephone number within a local calling area; and
- 73.2 the cellular telephone number portability service – a service that enables the end-user of a cellular telephone network service to change providers of that service but to retain the same telephone number (including the same cellular network access code).

³¹ Nova Energy “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4 (b) and (c).

³² Spark “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4a.

74. The local and cellular telephone number portability services were introduced when the Act was enacted in 2001, and this is their fourth review. In each of the previous Schedule 3 reviews of the number portability services, the Commission concluded that the services should remain in Schedule 1 of the Act, as number portability promotes competition in both fixed and cellular mobile markets for the long-term benefit of end-users by facilitating the process of switching between providers.³³
75. The number porting arrangements for local and mobile numbers are defined in the 2016 determination for the local and cellular number portability services.³⁴ The determination, which is due to expire on 19 December 2021, sets out the processes, timeframes, and obligations that relate to the porting of local and cellular numbers between providers. In anticipation of the determination's expiry, the Commission may initiate the process for a new determination if we are satisfied there are reasonable grounds for doing so.³⁵ Given our final decision in this review is to retain the number portability services in Schedule 1 of the Act, we will consider if there are reasonable grounds to initiate a process to renew the determination before it expires.
76. TCF submitted that it would like to consult further with the Commission regarding initiating a process to review the determination before it expires.³⁶ We intend to work closely with TCF to determine if there are reasonable grounds for us to initiate a process for a new number portability determination, and the timeframe for this process.

How the number portability services promote competition

77. The number portability services allow end-users to switch service providers while maintaining their existing telephone number.
78. Each of the number portability services are fundamental inputs that promote competition in downstream retail telecommunications markets by reducing the barriers to switching for end-users, ensuring that the process is easy to start and that customers are not left without communications for a long period.
79. The absence of number portability would likely hinder the competitive process by raising switching costs that customers would incur when changing their service provider. Customers often prefer to keep their number when changing

³³ See Commerce Commission "Schedule 3 investigation into the extension of regulation of designated and specified services final report" (28 August 2006), paragraph 175; Commerce Commission "Final Decision on whether to investigate omitting certain Designated and Specified Services from Schedule 1 under clause 1(3) of Schedule 3 of the Telecommunications Act 2001" (16 September 2011), paragraph 33; and Commerce Commission "Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001" (30 June 2016), paragraphs 151-153.

³⁴ Commerce Commission "Determination for the designated multinet network services of 'local telephone number portability service' and 'cellular telephone number portability service'" (19 December 2016).

³⁵ The process for designated multinet network service determinations is set out in Subpart 3 of Part 2 of the Act, but broadly includes notification, investigation, a draft determination, consultation, and a final determination.

³⁶ TCF "Submission on draft decision on Schedule 3 review of Schedule 1 services" (26 March 2021) at paragraph 5

telecommunications’ provider. High switching costs tend to undermine competition and do not promote the long-term benefit of end-users because they are likely to make entry and expansion more difficult and markets less competitive.

Developments since our 2016 review

80. Since our 2016 review, the number portability services continue to play an important role in promoting competition in the downstream retail markets in which fixed and mobile telephony services are supplied. The aggregate volume of ported numbers continues to increase, as reported by the TCF and summarised in Figure 2 and Figure 3 on the following page.

Figure 2: Local Number Ports

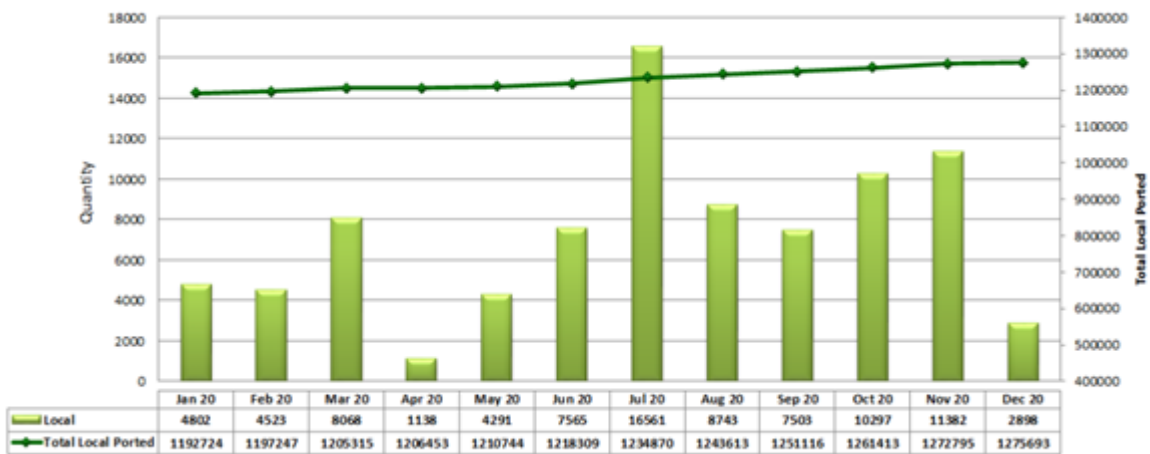
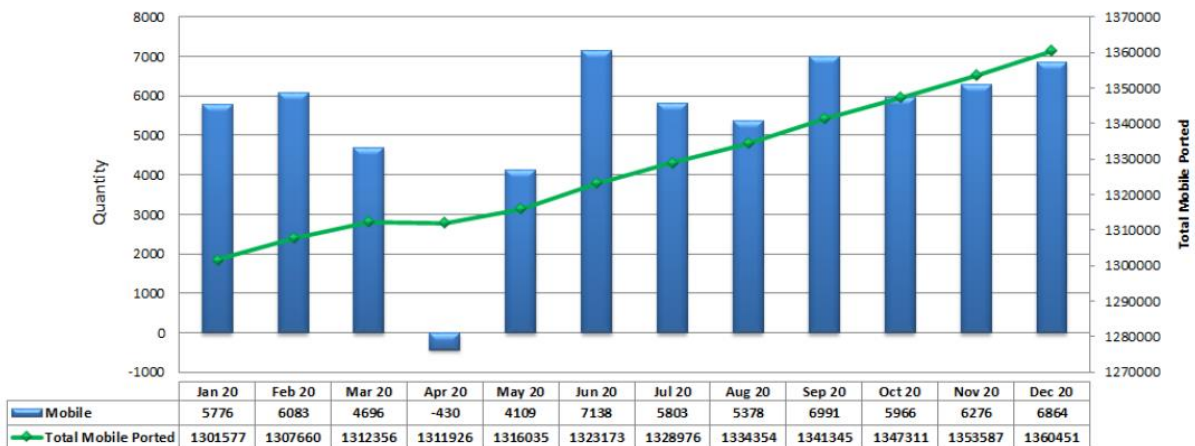


Figure 3: Mobile Number Ports



Source: TCF website

81. In our mobile market study, we noted that the volume of mobile number ports each year was around 5% of total mobile subscribers.³⁷ We also referred to the

³⁷ Commerce Commission “Mobile Market Study – Findings” (26 September 2019), paragraph 4.126.

introduction of mobile telephone number portability as an important factor in reducing switching barriers in the mobile market.³⁸

Submissions on number portability

82. TCF submitted that “the Number Portability service continues to work well and meets the needs of the industry and consumers and continues to promote competition for retail telecommunications fixed and mobile services”.³⁹
83. Nova submitted that “number portability continues to play an important role in reducing barriers to customer switching and promoting competition in downstream retail markets in which fixed and mobile telephony services are supplied”.⁴⁰
84. 2degrees submitted “number portability continues to play an important role in reducing barriers to customer switching and promoting competition in retail markets”.⁴¹

Our final decision on number portability

85. For the reasons given above, our final decision confirms our draft decision that there are not reasonable grounds for commencing an investigation into whether the local and cellular number portability services should be omitted from Schedule 1 of the Act.

Co-location on cellular mobile transmission sites

86. Our final decision is that there are not reasonable grounds for commencing an investigation into whether the mobile co-location service should be omitted from Schedule 1 of the Act. Our reasons for this final decision are explained below.

Description of the mobile co-location service and regulatory background

87. The specified mobile co-location service in Schedule 1 of the Act requires cellular mobile telephone network operators to provide for co-location on towers, poles, masts, or other similar structures, along with associated utility services. According to the service description contained in the STD,⁴² utility services include services such as the provision of lighting, air-conditioning, and power.
88. The mobile co-location service was included as a specified service in Schedule 1 of the Act in 2001.

³⁸ Commerce Commission “Mobile Market Study – Findings” (26 September 2019), paragraph 4.137.

³⁹ TCF “Submission on draft decision on Schedule 3 review of Schedule 1 services” (26 March 2021) at paragraph 3.

⁴⁰ Nova “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4c

⁴¹ 2degrees “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at page 1

⁴² Commerce Commission “Standard Terms Determination for Co-location on Cellular Mobile Transmission Sites, Schedule 1 Mobile Co-location Service Description” (11 December 2008), paragraph 2.3.

89. We have previously considered whether the specified mobile co-location service should remain in Schedule 1.
- 89.1 In the 2006 investigation, we concluded that the specified mobile co-location service should remain in Schedule 1 on the basis that in the absence of regulation, the established mobile network operators (Telecom and Vodafone) could deter or delay the entry and expansion of a third mobile network operator;⁴³
- 89.2 In the 2011 review, we again concluded that the specified mobile co-location service should remain a regulated service. We noted that regulation of co-location would promote competition, efficiency, and more rapid deployment of competing infrastructure;⁴⁴
- 89.3 In the 2016 review, we noted that there had been increasing use of mobile co-location, and that the co-location service played an important role in the deployment of new mobile sites and in promoting competition and expansion in the provision of retail mobile services.⁴⁵ We noted that the ability to co-locate was likely to be particularly important for reaching more remote areas and when quickly deploying new technologies such as 4G LTE and 5G.⁴⁶
90. We set the non-price terms of access for the mobile co-location service through an STD in 2008.⁴⁷ The STD covers issues such as provisioning of the co-location service, forecasting, and interference management.

How the mobile co-location service promotes competition

91. Mobile co-location is a service that enables a mobile network operator (MNO) to install mobile network transmission and reception equipment on the mast of another MNO. The mobile co-location service is illustrated in Figure 4.

⁴³ Commerce Commission “Schedule 3 investigation into the extension of regulation of designated and specified services Final Report” (28 August 2006), paragraphs 129, 130.

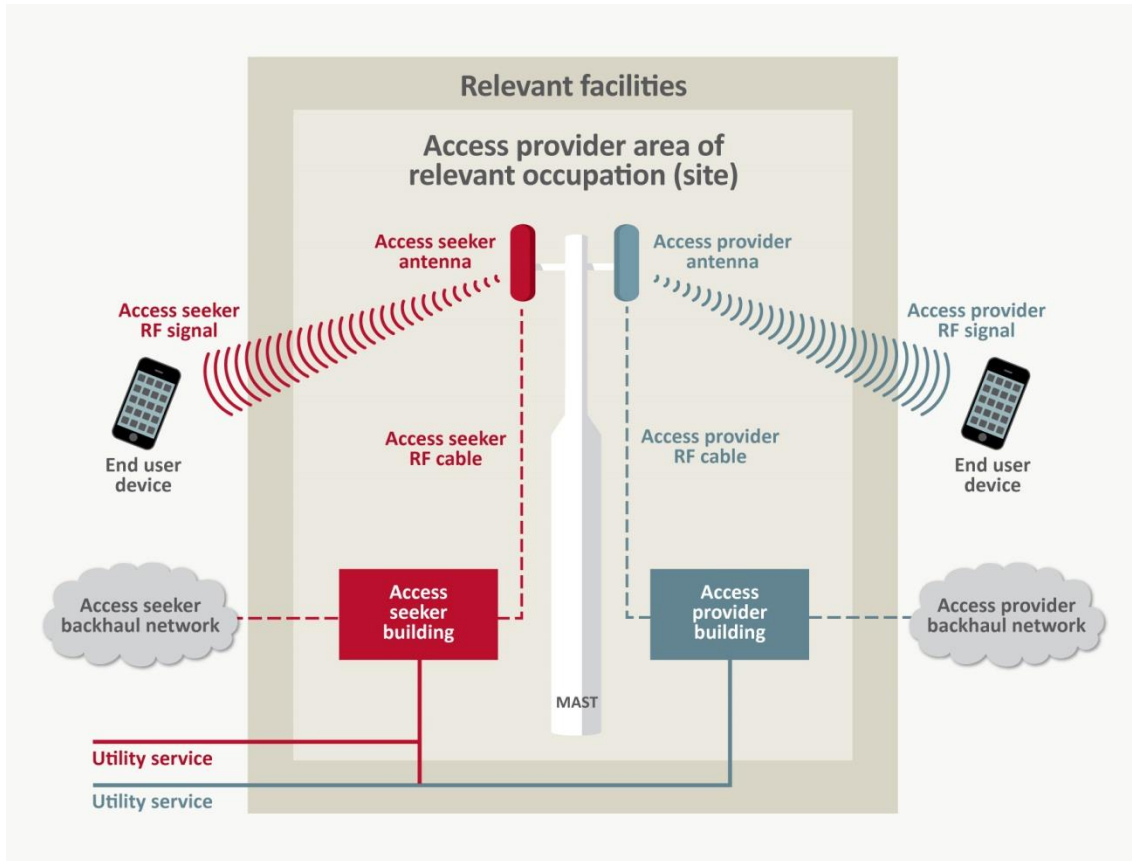
⁴⁴ Commerce Commission “Final Decision on whether to investigate omitting certain Designated and Specified Services from Schedule 1 under clause 1(3) of Schedule 3 of the Telecommunications Act 2001” (16 September 2011), paragraphs 29, 30.

⁴⁵ Commerce Commission “Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001” (30 June 2016), paragraph 156.

⁴⁶ Commerce Commission “Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001” (30 June 2016), paragraph X28.1.

⁴⁷ Commerce Commission “Standard Terms Determination for the specified service Co-location on cellular mobile transmission sites” (11 December 2008) Decision 661.

Figure 4: Mobile co-location service



92. Where infrastructure exists, mobile co-location can promote competition in the mobile market by allowing the access seeker MNO to expand its geographic reach within which it can offer retail mobile services. Co-location can also facilitate expansion of mobile coverage into unserved areas by sharing the costs of deploying new mobile infrastructure, particularly in more remote areas where the costs of building mobile sites have to be recovered across a relatively dispersed customer base.
93. In the absence of co-location, an MNO could increase its geographic coverage either by roaming on another network, or by extending its own network infrastructure. However, each of these alternatives may pose challenges for the MNO:
- 93.1 National roaming is a wholesale mobile access service which allows customers on one MNO to roam on the network of another MNO. However, roaming may limit the ability of the access seeker MNO to compete independently and to offer innovative and differentiated services; and
- 93.2 Building new network infrastructure may not always be efficient or viable, especially in more remote areas where there may be insufficient demand to justify duplication of infrastructure.

Developments since our 2016 review

94. Since our 2016 review, there has been continued use of co-location, in particular on RBI sites. For example:
- 94.1 in August 2016, MBIE reported that 154 new cellular mobile transmission sites had been built under RBI1, all of which allow for co-location by competing operators. MBIE noted that 84% of these new towers had more than one operator;⁴⁸
 - 94.2 during our mobile market study:
 - 94.2.1 2degrees noted that it co-locates on more than 250 towers owned by competitor telecommunications operators;⁴⁹ and
 - 94.2.2 Vodafone submitted that there has been significant growth in co-location, with over 80% of RBI sites built by Vodafone hosting co-located equipment from the other MNOs and wireless internet service providers (WISPs).⁵⁰
 - 94.3 in 2018, the expansion of the RBI programme (RBI2) commenced, with the Rural Connectivity Group (RCG) and regional WISPs partnering with the Crown to increase broadband and mobile coverage. RCG has reported increasing interest by WISPs in co-location on new RCG infrastructure.⁵¹
95. We have previously noted that co-location on existing cell sites can be more challenging than on new cell sites, as existing towers may have been built to accommodate a single set of equipment, and strengthening may be required for existing masts to be able to host additional equipment.⁵² We note that although an access provider of a designated or specified service must provide access in accordance with the standard access principles set out in clause 5 of Schedule 1 of the Act, there are a number of limits on the application of these principles. In particular, clause 6(1)(a) of Schedule 1 refers to the technical and operational practicability having regard to the access provider's network.
96. We also acknowledge that the importance of co-location may vary in different parts of the country. For example, co-location is likely to be less relevant in the deployment of dense, capacity-driven 5G sites in urban areas. However, the ability to co-locate may remain an important option in more remote areas.

⁴⁸ MBIE "Rural Broadband Initiative Phase 1" (August 2016).

⁴⁹ 2degrees "Submission in response to the Commerce Commission's Mobile Market Study" (October 2018), page 31.

⁵⁰ Vodafone "Vodafone Submission: Study of mobile telecommunications markets in New Zealand" (26 October 2018), page 19.

⁵¹ RCG "Mobile co-location services centre-stage as more Wireless Internet Service Providers get onboard", at: <https://www.thercg.co.nz/mobile-co-location-services-taking-centre-stage-as-more-wireless-internet-service-providers-wisps-get-onboard-for-rural-broadband-rollout/>

⁵² Commerce Commission "Mobile Market Study - Findings" (26 September 2019), paragraph 7.29.

Submissions on mobile co-location

97. Nova submitted “[t]he ability of an MNO to co-locate mobile network transmission and reception equipment on the infrastructure of another MNO continues to facilitate competition between MNOs, particularly in more remote areas”.⁵³
98. 2degrees submitted “we agree the ability to co-locate equipment on the infrastructure of another mobile network operator continues to facilitate competition between mobile operators”.⁵⁴
99. Spark commented that mobile co-location remains an important option in remote areas. However, Spark submitted that mobile operators face strong incentives to reduce costs and share infrastructure, as evidenced by the significant sharing that occurs in practice.⁵⁵

Our final decision on mobile co-location

100. 2degrees and Nova both agreed with our draft decision.
101. In response to Spark’s submission, we note that while operators may face incentives to share infrastructure in order to reduce costs, they may also face conflicting incentives to do so where this enables a competitor to expand coverage. We also note that although sharing has been occurring, it has been against a backdrop of the co-location service being available in Schedule 1 of the Act if commercial efforts were to fail.
102. For the reasons given above, our final decision confirms our draft decision that there are not reasonable grounds for commencing an investigation into whether the mobile co-location service should be omitted from Schedule 1 of the Act.

⁵³ Nova “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4(d).

⁵⁴ 2degrees “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at page 1.

⁵⁵ Spark “Submission on draft decision on Schedule 3 review of Schedule 1 services” (24 March 2021) at paragraph 4b.